

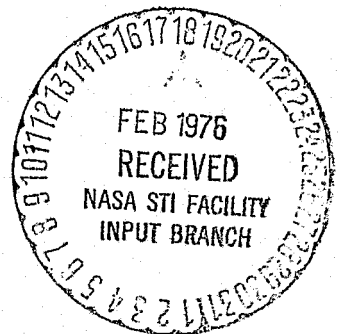
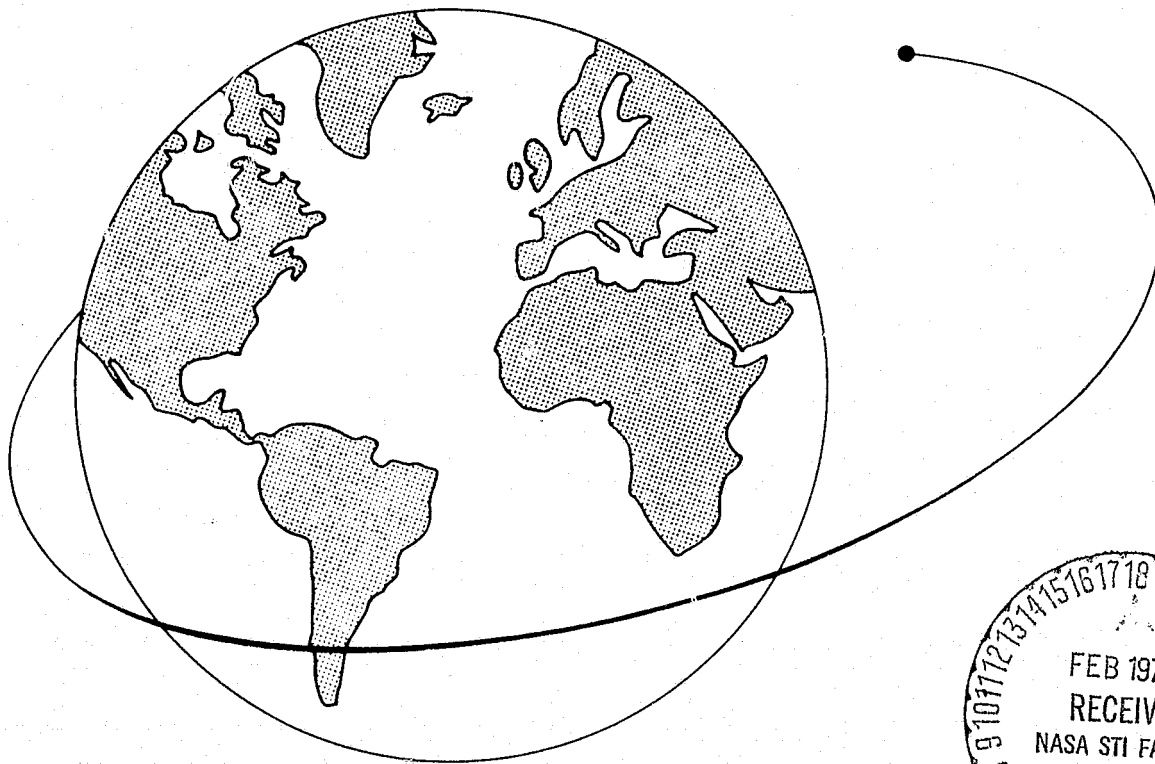
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A CATALOG OF ATMOSPHERIC DENSITIES FROM THE DRAG ON FIVE BALLOON SATELLITES

L. G. JACCHIA and J. W. SLOWEY



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Luigi G. Jacchia and Jack W. Slowey

August 29, 1975

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TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	v
1 INTRODUCTION	1
2 METHOD OF COMPUTATION	5
3 EXPLANATION OF THE DENSITY TABLES	7
4 DENSITY PLOTS	9
5 ACKNOWLEDGMENTS	13
6 REFERENCES	15

ILLUSTRATIONS

	<u>Page</u>
1 Doubly smoothed values of the effective heights that apply to densities in this catalog	3
2 Densities derived from the atmospheric drag on satellite 1963 53A reduced to a constant height of 800 km compared to densities for the same height at perigee computed from Jacchia's 1971 density model	10
3 Plots similar to those of Figure 2, but showing and comparing results from 1964 76A at a height of 580 km	11

TABLES

1 Basic data on the satellites studied	17
2 Standard heights to which the densities in Table 3 are reduced	18
3 Acceleration, drag, atmospheric densities, atmospheric temperatures, and geomagnetic parameters	20

ABSTRACT

A catalog of atmospheric densities derived from the drag on five balloon satellites is presented. These densities replace and, in two cases, considerably extend previously published results on these same satellites. Much of the catalog is based on precisely reduced Baker-Nunn observations and, for that reason, provides much better time resolution than was possible before. The effect of direct solar radiation pressure has been precisely evaluated, and that of terrestrial radiation pressure has been included in every case. The interval covered for each satellite varies between 3.1 and 7.6 years, with the data extending from early 1961 to early 1973.

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1. INTRODUCTION

We present herein a catalog of atmospheric densities determined from the drag on five balloon satellites: 1961 51 (Explorer 9), 1963 53A (Explorer 19), 1964 4A (Echo 2), 1964 76A (Explorer 24), and 1968 66A (Explorer 39). Densities from all five satellites have been published in previous catalogs (Jacchia and Slowey, 1965, 1970, 1972). For satellites 1963 53A and 1968 66A, the densities given here extend considerably beyond the intervals listed in the earlier catalogs. And in every case, the densities herein are of better quality and are intended to replace earlier ones.

Previously published densities were based entirely on field-reduced Baker-Nunn observations and other observations of similar accuracy. The angular accuracy, or the equivalent, of these observations was a few minutes of arc. In the cases of 1963 53A, 1964 76A, and all but about the final 25% of the lifetime of 1961 51, the densities herein are derived from precisely reduced Baker-Nunn observations. Accurate to a few seconds of arc, these observations enable densities to be determined with considerably better time resolution than is possible from field-reduced observations.

For this catalog, we have taken pains to evaluate the effects of radiation pressure as precisely as possible, as the contribution of radiation pressure to orbital acceleration must be considered in determining atmospheric density. At the heights typical of the balloon satellites, this is an extremely significant correction. For each satellite, we have accurately determined the reflection factor, which takes into account

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the small component of diffuse reflection from the satellite's surface, by analyzing the variations in orbital eccentricity. We have also included the small but often significant effects of albedo and infrared radiation coming from the earth.

Some basic data on the five satellites are presented in Table 1. The second column gives the range of standard height for each satellite, the standard height being one of the two heights to which each value of density was reduced and tabulated in the density catalog (Table 3). The other is the smoothed effective height. The effective height of a density determination is the average of the actual height around the satellite's orbit weighted by local atmospheric drag, which was estimated from a model of atmospheric density. The individual effective heights have been smoothed to eliminate the short-term effects due to the variations in the density scale height of the atmosphere that are associated with geomagnetic disturbances. A "standard" height, constant over as long an interval as possible, was selected to be roughly equal to the median of the effective heights over that interval. We have reduced densities to such a standard height in order that they can be seen free of those variations due merely to relatively small changes in height. Unfortunately, the standard height must be changed frequently in the case of the balloons because radiation pressure causes large changes in the heights of these satellites, and the reduction to a standard height can be made with assured accuracy only over a relatively short height interval. A detailed tabulation of the standard heights that apply to this density catalog is given in Table 2 as a function of the Modified Julian Date ($MJD = JD - 2,400,000.5$), which is the independent variable in the catalog.

The last column of Table 1 gives the time resolution of the densities in the catalog. The figures in parentheses are the highest resolution during large geomagnetic perturbations; the other values represent the range of the resolution under more normal conditions. The remaining columns in Table 1 are self-explanatory.

The coverage of the catalog in time and height can be seen graphically in Figure 1, where we have plotted the smoothed effective height for each satellite as a function of time over its catalog interval. Heights in the figure have been further smoothed to eliminate relatively short-period variations that arise mainly as a result of the earth's oblateness and, thus, only approximate the smoothed effective heights of the catalog. A tick mark on the plot for 1961 $\delta 1$ indicates the time at which the change from precisely reduced to field-reduced observations occurs.

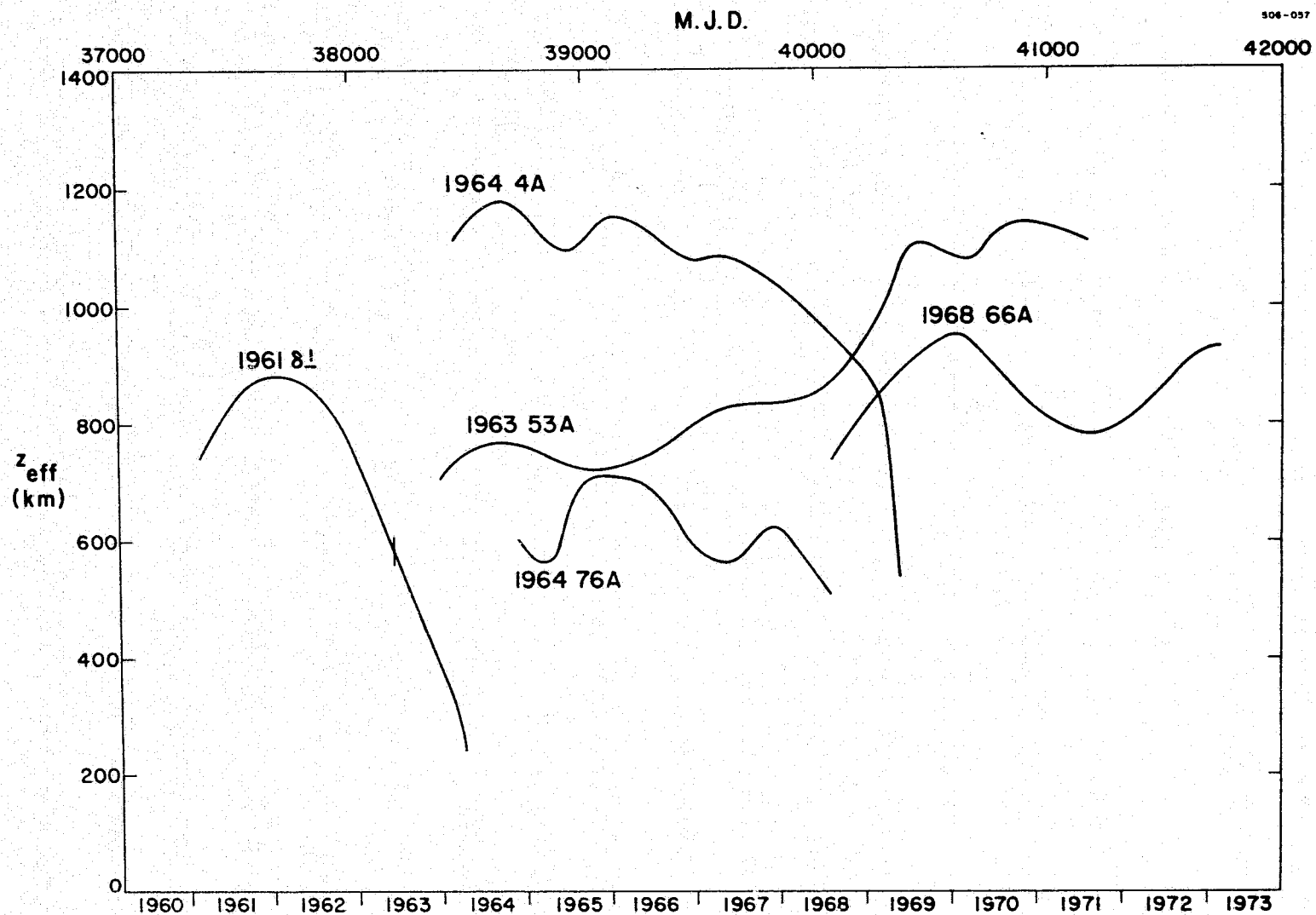


Figure 1. Doubly smoothed values (see text) of the effective heights that apply to densities in this catalog. They are plotted over the catalog interval for each satellite.

2. METHOD OF COMPUTATION

The method by which we determined atmospheric densities from satellite observations has previously been described in some detail (Jacchia and Slowey, 1962). We computed the contribution of direct solar radiation pressure to the observed acceleration by means of a formulation similar to that given by Kozai (1961), in which a value of $2.000 \text{ cal cm}^{-2} \text{ min}^{-1}$ was assumed for the solar constant. We obtained values of the reflection constant by fitting the observed variations in orbital eccentricity through use of a program that numerically integrates the Lagrangian equations of motion and includes all the important perturbations. These fits were made over intervals of between 100 and 200 days in each case. Experience has shown (Slowey, 1974a) that the reflection constant for a particular satellite changes very little with time. The secular effect of terrestrial (earth albedo and infrared) radiation pressure was computed by integrating the appropriate Lagrangian equation around the orbit by numerical quadrature. By means of two-dimensional numerical quadrature over the visible cap of the earth, we determined the force at each point. For terrestrial radiation, we used a model based on published results from Tiros observations that includes seasonal-latitudinal variations (Slowey, 1974b). We used a variable model for the drag coefficient (Jacchia and Slowey, 1972) based on the work of Cook (1965, 1966).

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3. EXPLANATION OF THE DENSITY TABLES

The numerical results from the five satellites are given chronologically by satellite in Table 3. The time, in terms of the Modified Julian Date, appears in the first column of the table, followed by the observed rate of change of the anomalistic period, or "acceleration." The contributions to the acceleration ascribed to direct solar radiation pressure and to terrestrial radiation pressure are in the third and fourth columns, respectively. The following column lists the difference between the observed acceleration and the total acceleration due to radiation pressure - i. e., the portion of the acceleration due to atmospheric drag. Also included are the common logarithms of the density in grams per cubic centimeter, at the smoothed effective height (column six) and at the standard height (column seven). The local exospheric temperature above perigee corresponding to the computed densities in one of Jacchia's more recent models (Jacchia, 1971) is given in column eight. The last three columns contain, in order, the smoothed effective height, the difference in right ascension between perigee and the sun, and the difference in declination between perigee and the sun. The angular position associated with either density value in the table is assumed to be that of perigee.

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4. DENSITY PLOTS

We have not plotted all the densities for each satellite at a single standard height, as we have done previously, since the variations in height are so large for balloon satellites that reduction to a single standard height would be of very uncertain accuracy. Showing the effective-height densities would also be difficult (and not too meaningful) because of the large ranges in the values. We have, however, plotted in Figures 2 and 3 the densities for two of the satellites (1963 53A and 1964 76A) over a single interval of about a year, in which the tabular standard height for each satellite remains constant. In both figures, the corresponding values computed from Jacchia's 1971 density model (Jacchia, 1971) are shown for comparison. The figures should serve to illustrate the quality and resolution of the densities in the catalog, as well as the generally excellent agreement of the model with observation.

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EXPLORER 19 (1963 53A) $\bar{z} = 800$ km

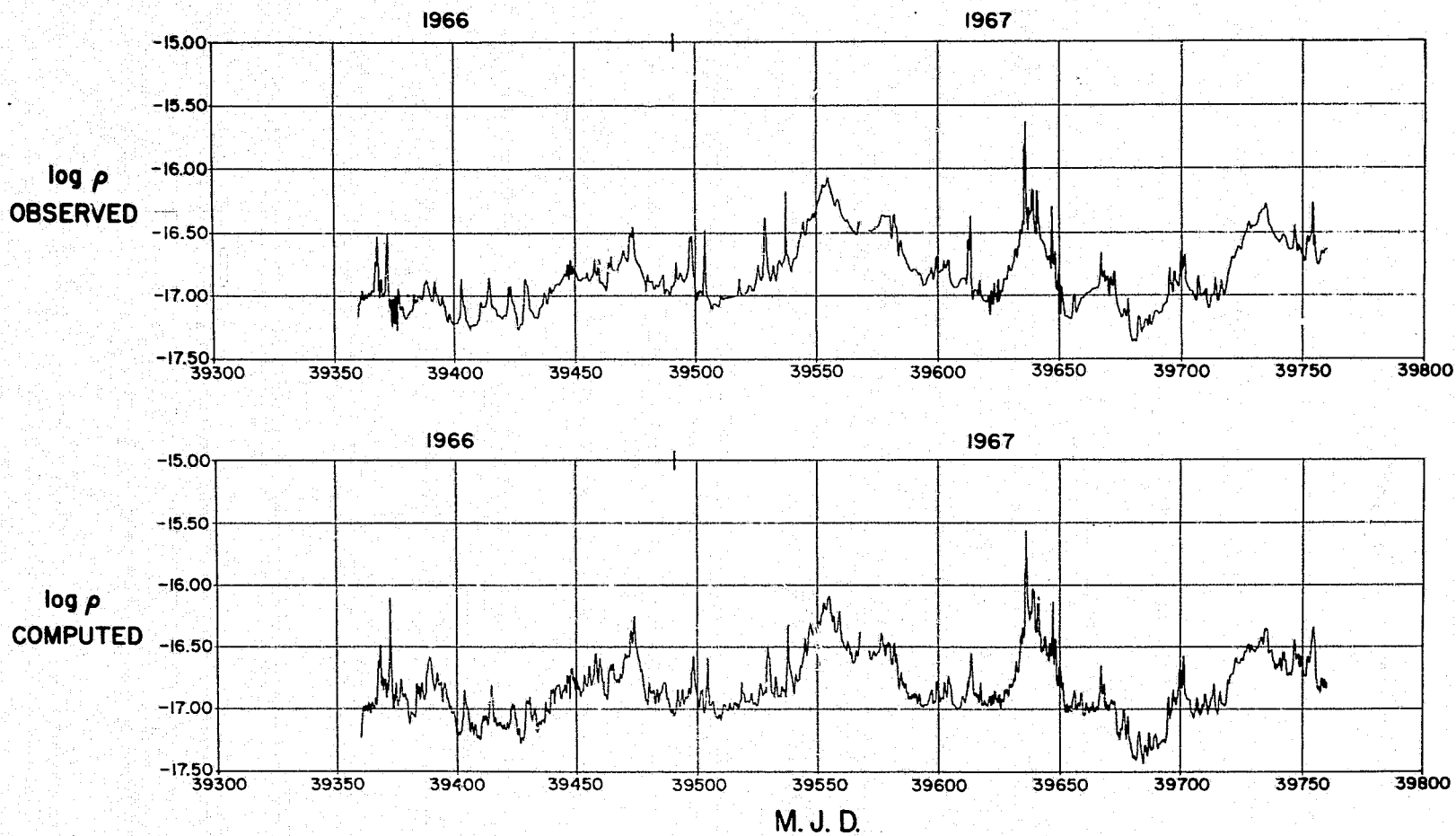


Figure 2. Densities derived from the atmospheric drag on satellite 1963 53A reduced to a constant height of 800 km (upper strip) compared to densities for the same height at perigee computed from Jacchia's 1971 density model (lower strip).

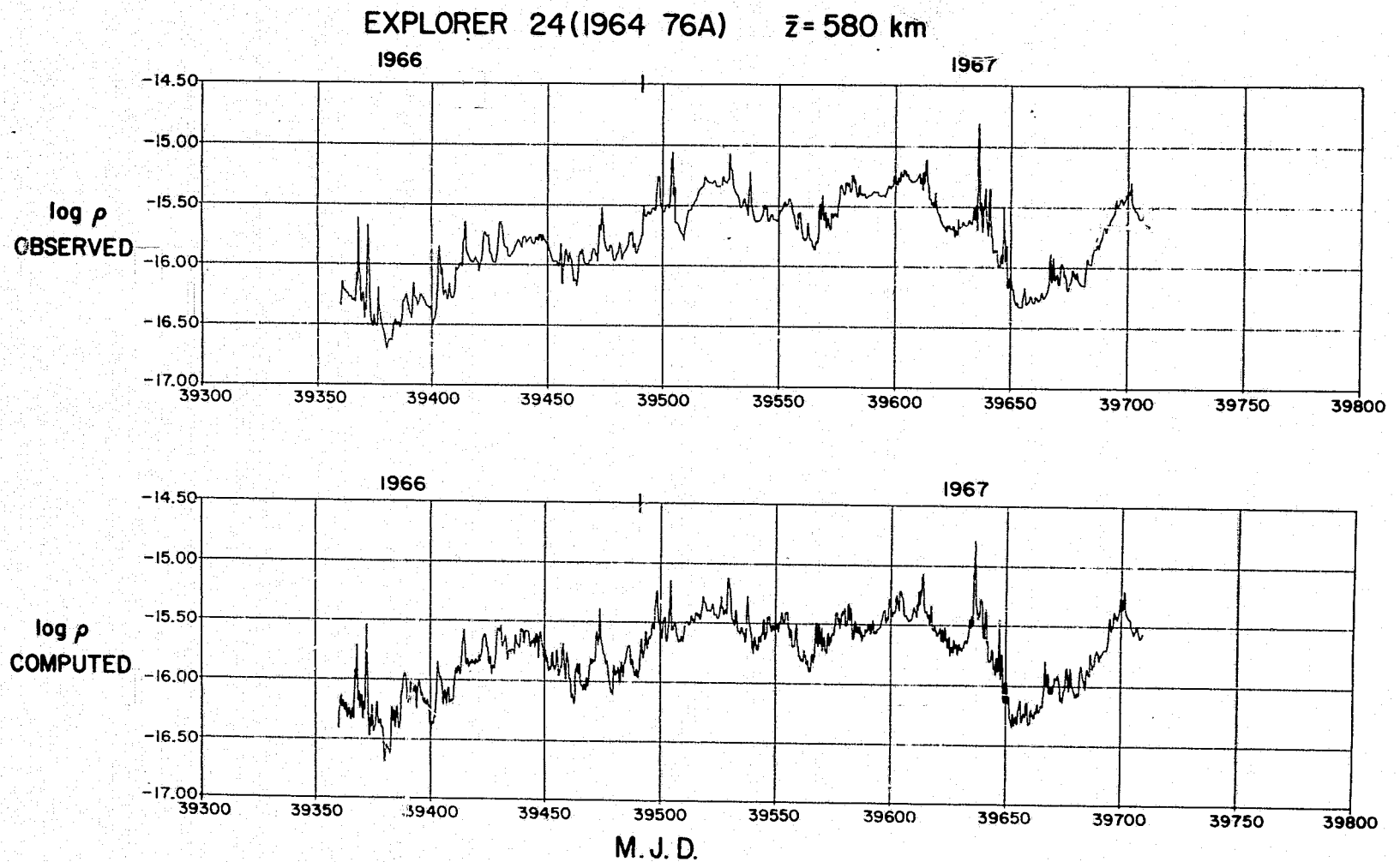


Figure 3. Plots similar to those of Figure 2, but showing and comparing results from 1964 76A at a height of 580 km.

5. ACKNOWLEDGMENTS

The assistance of Margaret P. Anderson, I. Gene Campbell, and Bradford G. Small in the preparation of this catalog is gratefully acknowledged. We would also like to express our appreciation to the 14th Aerospace Force, U. S. Air Force, for providing us with the radar observations, which were a major contribution to portions herein.

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Table 1. Basic data on the satellites studied.

Satellite	Range of standard height (km)	Area/mass ratio (cm ² g ⁻¹)	Reflection factor	Interval *	Resolution (days)
1961 81 (Explorer 9)	300- 880	15.844	1.072	1961 Feb. 24.50-1963 Jun. 8.80 1963 Jun. 9.00 -1964 Apr. 9.00	0.20-0.50 (0.20) 0.50-1.00 (0.20)
1963 53A (Explorer 19)	700-1050	13.021	1.051	1963 Dec. 23.50-1971 Aug. 25.50	0.20-0.50 (0.10)
1964 4A (Echo 2)	530-1130	51.546	1.062	1964 Jan. 31.00 -1969 Jun. 5.25	0.20-1.00 (0.20)
1964 76A (Explorer 24)	530- 630	12.20	1.044	1964 Nov. 26.00 -1968 Aug. 9.20	0.20-0.50 (0.10)
1968 66A (Explorer 39)	800- 900	11.153	1.092	1968 Aug. 16.50-1973 Mar. 27.00	0.25-1.00 (0.20)

* Densities have been determined entirely from precisely reduced Baker-Nunn observations for 1963 53A and 1964 76A and entirely from field-reduced observations and other observations of similar accuracy (mainly radar) for 1964 4A and 1968 66A. Densities for 1961 81 are from precisely reduced observations in the earlier interval and from field-reduced observations in the later.

Table 2. Standard heights to which the densities in Table 3 are reduced.

Satellite	Interval (MJD)	Standard height (km)
1961 51 (Explorer 9)	37354.50-37393.20	760
	37393.50-37437.00	790
	37437.50-37458.60	810
	37459.00-37503.00	820
	37503.50-37565.00	850
	37565.20-37633.50	880
	37633.60-37777.00	870
	37777.20-37836.50	860
	37836.60-37891.50	870
	37891.60-37917.00	840
	37917.50-37958.00	790
	37958.50-38017.60	750
	38017.80-38069.50	720
	38070.00-38132.50	660
	38132.60-38186.50	590
	38187.00-38244.50	550
	38245.00-38284.00	500
	38284.50-38297.50	480
	38298.00-38310.50	470
	38311.00-38325.80	460
	38326.00-38340.80	450
	38341.00-38356.00	440
	38356.50-38370.00	420
	38370.50-38395.50	410
	38396.00-38399.50	400
	38400.00-38413.50	390
	38418.20-38430.60	380
	38430.80-38447.50	360
	38448.00-38454.60	350
	38454.80-38481.80	340
	38482.00-38483.40	330
	38483.60-38488.40	320
	38488.60-38494.00	300
1963 53A (Explorer 19)	38386.50-39094.50	700
	39094.60-39951.00	800
	39951.20-40198.75	900
	40199.00-40366.25	1000
	40366.50-41188.50	1050
1964 4A (Echo 2)	38425.00-39527.50	1130
	39527.80-39916.60	1030
	39917.00-40216.50	930
	40217.00-40316.00	830
	40316.50-40343.00	730
	40343.20-40368.00	630
	40368.75-40377.25	530

Table 2 (cont.)

Satellite	Interval (MJD)	Standard height (km)
1964 76A (Explorer 24)	38725.00-38965.75	580
	38966.00-39361.60	630
	39361.75-39887.75	580
	39950.40-40077.20	530
1968 66A (Explorer 39)	40084.50-40295.00	800
	40295.50-40551.00	850
	40551.50-41005.50	900
	41006.00-41311.00	820
	41311.50-41602.00	800
	41603.00-41768.00	850

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Table 3. Acceleration, drag, atmospheric densities, atmospheric temperatures, and geometric parameters.

1961 51 (Explorer 9)

MJD	$-10^7 \dot{p}$	$10^7 \dot{p}_s$	$10^7 \dot{p}_t$	$-10^7 \dot{p}_a$	$\log \rho_0$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37354.50	3.56	11.36	1.07	16.00	-16.91	-17.04	894	726.8	309.1	34.6
55.00	2.85	11.28	1.07	15.19	.94	.06	888	728.4	309.1	33.2
55.50	2.04	11.15	1.08	14.27	.97	.08	879	730.0	309.0	31.7
56.00	1.72	11.05	1.08	13.86	.99	.10	874	731.6	308.8	30.2
56.50	2.62	10.95	1.08	14.64	.97	.07	883	733.1	308.7	28.7
57.00	3.54	10.84	1.08	15.46	.95	.05	892	734.6	308.5	27.2
57.50	4.28	10.72	1.08	16.08	.94	.03	898	736.0	308.2	25.7
58.00	5.64	11.68	1.08	18.41	.89	-16.97	919	737.4	308.0	24.1
58.50	6.55	11.58	1.08	19.21	.87	.96	926	738.8	307.7	22.5
59.00	6.69	11.46	1.09	19.24	.88	.95	926	740.1	307.3	20.9
59.50	5.66	10.27	1.09	17.02	.93	-17.01	909	741.4	307.0	19.2
60.00	5.06	10.11	1.10	16.27	.96	.02	902	742.6	306.6	17.6
60.50	4.68	9.99	1.10	15.77	.97	.03	898	743.8	306.3	16.0
61.00	4.07	9.86	1.10	15.04	-17.00	.05	892	744.9	305.9	14.3
61.50	3.56	9.76	1.10	14.41	.02	.07	886	746.1	305.5	12.6
62.00	2.98	9.63	1.10	13.70	.04	.08	880	747.1	305.0	10.9
62.50	2.54	9.51	1.11	13.16	.06	.10	874	748.2	304.6	9.3
63.00	1.75	9.38	1.11	12.24	.09	.13	863	749.2	304.2	7.6
37363.20	1.58	9.34	1.11	12.03	-17.10	-17.14	862	749.6	304.0	6.9
63.40	0.73	9.30	1.11	11.14	.14	.17	847	750.0	303.9	6.2
63.60	0.38	9.24	1.11	10.73	.15	.19	841	750.3	303.7	5.5
63.80	0.53	9.19	1.11	10.83	.15	.18	844	750.7	303.5	4.9
64.00	3.05	9.13	1.11	13.29	.06	.10	875	751.1	303.3	4.2
64.20	10.98	9.10	1.11	21.19	-16.86	-16.90	946	751.4	303.2	3.5
64.40	16.20	9.02	1.11	26.32	.76	.80	980	751.8	303.0	2.8
64.60	17.02	8.98	1.12	27.12	.76	.79	982	752.2	302.8	2.2
64.80	11.58	8.96	1.12	21.67	.86	.89	949	752.5	302.7	1.5
65.00	7.16	8.92	1.12	17.20	.95	.98	917	752.8	302.5	0.8
65.20	3.25	8.88	1.12	13.24	-17.06	-17.08	882	753.2	302.3	0.1
65.40	3.05	8.82	1.12	12.99	.07	.09	882	753.5	302.2	-0.5
65.60	2.00	8.79	1.12	11.91	.11	.13	866	753.8	302.0	-1.2
65.80	1.97	8.77	1.12	11.86	.11	.13	864	754.2	301.9	-1.9
66.00	1.93	8.70	1.12	11.76	.12	.14	860	754.5	301.7	-2.5
66.20	1.73	8.68	1.12	11.53	.13	.15	856	754.8	301.5	-3.2
66.40	1.52	8.65	1.13	11.30	.14	.15	853	755.1	301.4	-3.9
66.60	1.82	8.61	1.13	11.55	.13	.14	859	755.4	301.2	-4.5
66.80	1.94	8.59	1.13	11.66	.12	.13	862	755.7	301.1	-5.2
67.00	2.24	8.57	1.13	11.93	.11	.13	864	756.0	301.0	-5.9
67.20	2.53	8.54	1.13	12.20	.11	.12	865	756.3	300.8	-6.5
67.40	2.65	8.50	1.14	12.29	.11	.12	865	756.5	300.7	-7.2
67.60	2.94	8.47	1.14	12.55	.10	.11	870	756.8	300.5	-7.8
67.80	3.23	8.45	1.14	12.82	.09	.11	873	757.1	300.4	-8.5
68.00	5.72	8.39	1.14	15.25	.01	.02	899	757.3	300.3	-9.1
68.20	8.20	8.37	1.14	17.71	-16.95	-16.96	922	757.6	300.2	-9.8
68.40	9.16	8.36	1.14	18.67	.93	.94	930	757.9	300.0	-10.4
68.60	10.97	8.34	1.14	20.45	.88	.89	946	758.1	299.9	-11.1
68.80	11.25	8.33	1.15	20.73	.88	.89	946	758.4	299.8	-11.7
69.00	9.51	8.30	1.15	18.95	.92	.92	935	758.6	299.7	-12.4
69.20	5.56	8.28	1.15	14.99	-17.01	-17.02	905	758.8	299.6	-13.0
69.40	3.31	8.27	1.15	12.72	.08	.09	879	759.1	299.5	-13.6
69.60	2.24	8.25	1.15	11.64	.12	.13	862	759.3	299.4	-14.3
69.80	2.01	8.25	1.15	11.42	.13	.14	858	759.5	299.3	-14.9
70.00	1.96	8.25	1.15	11.36	.14	.14	857	759.8	299.2	-15.5
70.20	1.73	8.25	1.15	11.13	.15	.15	852	760.0	299.2	-16.1
70.40	1.50	8.24	1.15	10.90	.15	.15	850	760.2	299.1	-16.7
70.60	1.28	8.24	1.16	10.68	.16	.16	847	760.4	299.0	-17.4
70.80	0.88	8.24	1.16	10.28	.18	.18	840	760.6	299.0	-18.0
71.00	0.82	8.25	1.16	10.24	.18	.18	841	760.8	298.9	-18.6
71.20	0.60	8.25	1.16	10.01	.19	.19	834	761.0	298.9	-19.2

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37371.40	0.88	8.28	1.16	10.32	-17.18	-17.18	838	761.2	298.8	-19.8
71.60	0.83	8.30	1.16	10.28	.18	.17	838	761.4	298.8	-20.3
71.80	1.96	8.32	1.16	11.44	.13	.13	858	761.6	298.8	-20.9
72.00	2.07	8.34	1.16	11.57	.13	.12	860	761.8	298.8	-21.5
72.20	2.36	8.36	1.16	11.88	.12	.11	863	761.9	298.7	-22.1
72.40	2.48	8.37	1.16	12.01	.11	.11	863	762.1	298.7	-22.6
72.60	2.43	8.39	1.16	11.98	.11	.11	863	762.3	298.7	-23.2
72.80	2.72	8.42	1.17	12.30	.10	.09	868	762.5	298.7	-23.8
73.00	3.35	8.45	1.17	12.97	.08	.07	877	762.6	298.8	-24.3
73.20	3.47	8.47	1.17	13.11	.07	.06	880	762.8	298.8	-24.9
73.40	3.26	8.49	1.17	12.92	.08	.07	878	762.9	298.8	-25.4
73.60	2.55	8.53	1.17	12.25	.10	.09	867	763.1	298.9	-25.9
73.80	2.68	8.55	1.17	12.40	.10	.08	869	763.3	298.9	-26.5
74.00	2.81	8.58	1.18	12.56	.09	.08	872	763.4	299.0	-27.0
74.20	3.28	8.61	1.18	13.07	.07	.06	878	763.5	299.0	-27.5
74.40	4.77	8.65	1.18	14.60	.02	.01	897	763.7	299.1	-28.0
74.60	3.05	8.68	1.18	12.91	.08	.06	877	763.8	299.2	-28.5
74.80	2.85	8.72	1.18	12.75	.08	.07	875	764.0	299.3	-29.0
75.00	1.48	8.77	1.18	11.43	.13	.11	859	764.1	299.4	-29.5
75.20	1.12	8.80	1.18	11.10	.14	.12	856	764.2	299.5	-29.9
75.40	0.93	8.84	1.18	10.95	.14	.13	850	764.4	299.6	-30.4
75.60	0.74	8.89	1.18	10.81	.15	.13	846	764.5	299.7	-30.9
75.80	0.73	8.93	1.18	10.84	.15	.13	847	764.6	299.9	-31.3
76.00	1.05	8.97	1.18	11.21	.13	.11	856	764.7	300.0	-31.8
37376.50	1.52	9.09	1.18	11.79	-17.11	-17.09	866	765.0	300.4	-32.8
77.00	2.76	9.21	1.18	13.14	.06	.04	882	765.3	300.8	-33.8
77.50	4.30	9.34	1.18	14.82	.01	-16.98	901	765.6	301.3	-34.8
78.00	5.09	9.46	1.18	15.73	-16.98	.95	911	765.8	301.9	-35.7
78.50	4.85	9.57	1.19	15.61	.98	.96	910	766.0	302.4	-36.5
79.00	4.57	9.66	1.19	15.42	.99	.96	908	766.3	303.1	-37.2
79.50	4.90	9.77	1.20	15.87	.97	.95	913	766.5	303.8	-37.9
80.00	4.51	9.86	1.20	15.58	.98	.95	911	766.7	304.5	-38.5
80.50	3.73	9.95	1.21	14.89	-17.00	.97	902	766.9	305.2	-39.0
81.00	4.09	10.01	1.22	15.33	-16.98	.96	908	767.0	306.0	-39.4
81.50	4.54	10.09	1.22	15.85	.96	.94	914	767.2	306.7	-39.8
82.00	5.05	10.15	1.23	16.43	.95	.92	919	767.4	307.5	-40.1
82.50	5.47	10.19	1.24	16.91	.93	.91	924	767.5	308.3	-40.3
83.00	5.79	10.26	1.25	17.30	.92	.89	927	767.7	309.1	-40.4
83.50	5.98	10.29	1.26	17.53	.92	.89	930	767.8	309.9	-40.5
84.00	6.59	10.31	1.26	18.16	.90	.87	935	768.0	310.7	-40.4
84.50	6.93	10.34	1.27	18.55	.89	.86	938	768.1	311.4	-40.3
37385.00	7.87	10.38	1.28	19.53	-16.87	-16.83	946	768.3	312.1	-40.1
85.20	8.99	10.39	1.28	20.66	.84	.81	955	768.3	312.4	-40.0
85.40	9.26	10.40	1.28	20.94	.83	.80	957	768.4	312.7	-39.9
85.60	14.42	10.40	1.28	26.10	.74	.70	991	768.4	313.0	-39.8
85.80	18.57	10.40	1.28	30.25	.67	.63	1014	768.5	313.2	-39.7
86.00	15.61	10.40	1.28	27.29	.71	.67	1000	768.5	313.5	-39.5
86.20	15.69	10.39	1.28	27.35	.71	.68	999	768.6	313.7	-39.4
86.40	13.39	10.39	1.29	25.07	.75	.71	986	768.6	314.0	-39.2
86.60	12.62	10.39	1.29	24.29	.76	.73	981	768.7	314.2	-39.0
86.80	11.83	10.39	1.29	23.51	.78	.74	975	768.7	314.4	-38.8
87.00	10.71	10.38	1.29	22.37	.80	.77	967	768.8	314.6	-38.6
87.20	9.91	10.37	1.30	21.58	.82	.79	961	768.8	314.8	-38.4
87.40	9.79	10.36	1.30	21.44	.82	.79	960	768.9	315.0	-38.2
87.60	10.00	10.33	1.30	21.63	.82	.78	961	768.9	315.2	-38.0
87.80	10.03	10.32	1.30	21.65	.82	.78	961	769.0	315.4	-37.7

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37388.00	9.92	10.30	1.30	21.53	-16.82	-16.78	961	769.0	315.6	-37.5
88.50	9.94	10.29	1.30	21.53	.82	.78	961	769.1	316.0	-36.8
89.00	9.78	10.25	1.30	21.33	.82	.79	959	769.3	316.3	-36.1
89.50	9.69	10.19	1.30	21.18	.83	.79	958	769.4	316.6	-35.3
37389.80	9.68	10.17	1.30	21.15	-16.83	-16.79	958	769.5	316.8	-34.8
90.00	9.98	10.16	1.30	21.44	.82	.78	960	769.5	316.9	-34.5
90.20	10.44	10.15	1.30	21.89	.81	.77	964	769.6	317.0	-34.2
90.40	11.06	10.11	1.30	22.47	.79	.75	969	769.6	317.0	-33.8
90.60	12.35	10.09	1.30	23.74	.77	.73	977	769.7	317.1	-33.5
90.80	11.61	10.07	1.30	22.97	.79	.75	970	769.7	317.2	-33.1
91.00	10.85	10.06	1.30	22.21	.80	.77	965	769.8	317.2	-32.7
91.20	10.60	10.01	1.30	21.91	.81	.77	963	769.8	317.3	-32.4
91.40	10.00	9.98	1.30	21.28	.82	.78	959	769.9	317.3	-32.0
91.60	9.73	9.97	1.30	21.00	.83	.79	957	770.0	317.3	-31.6
91.80	8.94	9.95	1.30	20.19	.85	.81	950	770.0	317.3	-31.2
92.00	7.97	9.92	1.30	19.19	.87	.83	942	770.1	317.3	-30.8
92.20	9.02	9.88	1.29	20.20	.85	.80	951	770.1	317.3	-30.4
92.40	12.26	9.85	1.29	23.41	.78	.73	975	770.2	317.3	-30.0
92.60	14.65	9.84	1.29	25.78	.74	.69	990	770.2	317.3	-29.5
92.80	10.44	9.80	1.29	21.52	.82	.78	960	770.3	317.3	-29.1
93.00	6.38	9.76	1.28	17.42	.91	.87	927	770.4	317.3	-28.7
93.20	6.03	9.71	1.28	17.02	.92	.88	923	770.4	317.3	-28.3
37393.50	5.07	9.65	1.28	16.00	-16.95	-17.01	914	770.5	317.2	-27.6
94.00	3.84	9.55	1.28	14.67	.98	.05	901	770.7	317.1	-26.5
94.50	3.12	9.47	1.28	13.87	-17.01	.07	891	770.8	316.9	-25.3
95.00	2.26	9.39	1.27	12.92	.04	.10	880	771.0	316.7	-24.1
95.50	3.64	9.32	1.27	14.23	.00	.06	897	771.2	316.5	-23.0
96.00	5.06	9.22	1.26	15.54	-16.96	.03	909	771.4	316.2	-21.7
96.50	5.36	9.12	1.26	15.75	.96	.03	912	771.5	315.9	-20.5
37397.00	4.71	9.05	1.25	15.01	-16.98	-17.04	907	771.7	315.6	-19.3
97.20	4.39	9.00	1.25	14.64	.99	.05	904	771.8	315.4	-18.8
97.40	3.89	8.98	1.24	14.12	-17.01	.06	897	771.9	315.3	-18.2
97.60	3.23	8.94	1.24	13.41	.03	.09	887	772.0	315.2	-17.7
97.80	2.56	8.90	1.24	12.70	.05	.11	879	772.1	315.0	-17.2
98.00	2.57	8.88	1.24	12.69	.05	.11	881	772.1	314.9	-16.7
98.20	2.91	8.83	1.24	12.99	.04	.10	884	772.2	314.7	-16.2
98.40	3.25	8.80	1.24	13.29	.04	.10	887	772.3	314.6	-15.7
98.60	4.27	8.78	1.24	14.28	.01	.07	898	772.4	314.4	-15.2
98.80	5.61	8.75	1.23	15.59	-16.97	.04	914	772.5	314.3	-14.7
99.00	4.60	8.72	1.23	14.54	-17.00	.06	902	772.6	314.1	-14.1
99.20	4.08	8.68	1.22	13.99	.02	.08	895	772.7	314.0	-13.6
99.40	3.06	8.65	1.22	12.93	.05	.11	882	772.7	313.8	-13.1
99.60	2.88	8.60	1.22	12.70	.06	.12	879	772.8	313.7	-12.6
99.80	2.70	8.58	1.22	12.50	.07	.13	877	772.9	313.5	-12.1
37400.00	2.01	8.55	1.22	11.79	.09	.15	867	773.0	313.3	-11.5
00.20	2.34	8.53	1.21	12.08	.08	.14	871	773.1	313.2	-11.0
00.40	3.17	8.48	1.21	12.86	.06	.12	882	773.2	313.0	-10.5
00.60	3.66	8.46	1.20	13.31	.04	.10	889	773.3	312.8	-10.0
00.80	3.30	8.42	1.20	12.92	.06	.12	884	773.4	312.7	-9.4
01.00	2.94	8.38	1.20	12.53	.07	.13	879	773.5	312.5	-8.9
01.20	2.25	8.36	1.20	11.81	.09	.15	870	773.6	312.3	-8.4
01.40	1.72	8.34	1.20	11.26	.11	.17	864	773.7	312.2	-7.9
01.60	0.18	8.30	1.19	9.67	.18	.23	835	773.8	312.0	-7.3
01.80	-0.52	8.27	1.19	8.94	.22	.27	819	773.9	311.8	-6.8
02.00	-0.71	8.25	1.18	8.73	.23	.28	815	774.0	311.7	-6.3
02.20	-1.07	8.23	1.18	8.35	.24	.29	809	774.1	311.5	-5.7
02.40	-1.09	8.20	1.18	8.29	.25	.30	808	774.3	311.3	-5.2

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37402.60	0.58	8.17	1.18	9.93	-17.17	-17.22	845	774.4	311.2	-4.7
02.80	1.40	8.15	1.17	10.72	.14	.19	856	774.5	311.0	-4.2
03.00	2.56	8.15	1.17	11.88	.10	.15	874	774.6	310.8	-3.7
03.20	4.40	8.13	1.16	13.69	.03	.08	901	774.7	310.7	-3.1
03.40	4.55	8.12	1.16	13.83	.03	.08	903	774.8	310.5	-2.6
03.60	4.19	8.09	1.16	13.45	.04	.09	898	774.9	310.4	-2.1
03.80	4.17	8.08	1.15	13.41	.05	.10	896	775.1	310.2	-1.6
04.00	6.21	8.06	1.15	17.42	-16.93	-16.99	940	775.2	310.1	-1.1
04.20	15.97	8.05	1.14	25.16	.76	.82	1002	775.3	309.9	-0.5
04.40	13.41	8.04	1.14	22.59	.81	.87	986	775.4	309.8	0.0
04.60	8.84	8.04	1.14	18.02	.92	.98	946	775.5	309.6	0.5
04.80	5.44	8.04	1.14	14.62	-17.01	-17.06	913	775.7	309.5	1.0
05.00	3.91	8.03	1.13	13.07	.06	.11	895	775.8	309.3	1.5
37405.50	2.74	8.00	1.12	11.86	-17.10	-17.15	881	776.1	309.0	2.8
06.00	2.18	7.95	1.11	11.24	.13	.17	873	776.4	308.7	4.0
06.50	1.79	7.94	1.10	10.83	.14	.19	869	776.8	308.4	5.2
07.00	2.03	7.94	1.09	11.07	.13	.17	876	777.1	308.1	6.4
07.50	2.12	7.93	1.08	11.13	.13	.17	879	777.5	307.9	7.6
08.00	2.44	7.94	1.08	11.46	.12	.16	884	777.8	307.7	8.8
08.50	2.73	7.98	1.07	11.78	.11	.15	890	778.2	307.5	10.0
09.00	2.69	8.00	1.06	11.75	.11	.15	890	778.6	307.4	11.1
09.50	2.71	8.02	1.05	11.78	.11	.15	892	778.9	307.3	12.2
10.00	2.55	8.03	1.04	11.62	.12	.15	894	779.3	307.2	13.2
10.50	1.88	8.04	1.02	10.94	.14	.17	888	779.7	307.2	14.3
11.00	1.55	8.09	1.00	10.65	.15	.19	885	780.1	307.2	15.3
11.50	2.48	8.15	0.99	11.62	.12	.15	899	780.5	307.3	16.2
12.00	3.68	8.19	0.97	12.84	.08	.11	914	780.9	307.4	17.1
12.50	4.22	8.24	0.96	13.43	.06	.09	923	781.4	307.6	18.0
13.00	4.67	8.28	0.94	13.88	.04	.08	929	781.8	307.9	18.8
13.50	4.91	8.33	0.92	14.16	.04	.07	934	782.2	308.1	19.6
14.00	4.89	8.36	0.90	14.16	.04	.06	935	782.7	308.5	20.3
14.50	4.84	8.39	0.88	14.11	.04	.06	936	783.1	308.9	21.0
15.00	5.05	8.44	0.86	14.34	.03	.06	940	783.6	309.3	21.6
15.50	5.27	8.47	0.84	14.58	.02	.05	944	784.0	309.8	22.1
16.00	5.68	8.48	0.82	14.98	.01	.03	950	784.5	310.3	22.6
16.50	5.68	8.51	0.81	15.01	.01	.03	953	785.0	310.9	23.0
17.00	5.60	8.54	0.79	14.93	.01	.03	954	785.5	311.5	23.4
17.50	5.27	8.57	0.77	14.61	.02	.04	951	785.9	312.2	23.7
18.00	5.22	8.58	0.76	14.56	.03	.04	952	786.4	312.9	23.9
18.50	4.65	8.57	0.74	13.96	.05	.06	947	786.9	313.6	24.0
19.00	4.27	8.55	0.72	13.55	.06	.07	944	787.4	314.3	24.0
19.50	4.62	8.51	0.70	13.83	.05	.06	949	787.9	315.1	24.0
20.00	5.00	8.48	0.68	14.16	.04	.04	955	788.4	315.8	23.9
20.50	5.62	8.45	0.67	14.74	.02	.02	963	788.9	316.6	23.7
21.00	6.01	8.42	0.66	15.08	.01	.01	969	789.5	317.3	23.5
21.50	5.37	8.37	0.64	14.38	.03	.03	963	790.0	318.0	23.1
22.00	3.65	8.34	0.63	12.62	.09	.09	942	790.5	318.8	22.7
22.50	1.91	8.27	0.62	10.79	.16	.16	918	791.0	319.4	22.2
23.00	1.25	8.19	0.60	10.04	.20	.19	908	791.6	320.1	21.7
23.50	1.31	8.12	0.59	10.01	.20	.19	908	792.1	320.7	21.0
24.00	2.87	8.03	0.58	11.48	.14	.13	931	792.6	321.3	20.3
24.50	5.80	7.92	0.57	14.29	.04	.03	966	793.2	321.8	19.6
25.00	6.56	7.80	0.56	14.93	.02	.01	974	793.7	322.3	18.7
25.50	5.95	7.69	0.56	14.20	.04	.02	968	794.3	322.8	17.8
26.00	4.54	7.56	0.55	12.65	.10	.08	951	794.8	323.2	16.9
26.50	3.53	7.43	0.54	11.50	.14	.12	936	795.4	323.5	15.9
27.00	2.21	7.29	0.54	10.04	.20	.18	915	795.9	323.8	14.8
27.50	1.35	7.15	0.54	9.04	.25	.23	898	796.5	324.0	13.7
28.00	0.56	7.01	0.53	8.10	.30	.28	880	797.0	324.2	12.5

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37428.50	0.69	6.86	0.52	8.07	-17.30	-17.27	880	797.6	324.3	11.3
29.00	0.75	6.69	0.52	7.96	.31	.28	877	798.2	324.4	10.1
29.50	1.10	6.53	0.52	8.14	.30	.27	882	798.7	324.4	8.8
30.00	1.72	6.35	0.52	8.59	.28	.25	891	799.3	324.4	7.4
30.50	2.59	6.16	0.52	9.27	.25	.21	904	799.9	324.4	6.1
31.00	3.47	5.99	0.52	9.98	.22	.18	917	800.4	324.3	4.7
31.50	4.02	5.80	0.52	10.34	.21	.16	923	801.0	324.1	3.3
32.00	4.37	5.62	0.52	10.51	.20	.15	926	801.6	323.9	1.8
32.50	4.19	5.42	0.52	10.13	.22	.17	921	802.1	323.7	0.4
33.00	3.81	5.24	0.51	9.56	.24	.20	910	802.7	323.5	-1.1
33.50	3.70	5.04	0.50	9.24	.26	.21	904	803.3	323.2	-2.6
34.00	3.79	4.85	0.50	9.14	.26	.22	904	803.8	322.9	-4.2
34.50	3.91	4.65	0.49	9.05	.26	.22	906	804.4	322.5	-5.7
35.00	4.06	4.46	0.48	9.00	.27	.22	901	805.0	322.2	-7.3
35.50	4.32	4.28	0.48	9.08	.27	.21	900	805.5	321.8	-8.8
36.00	4.56	4.08	0.47	9.12	.27	.21	901	806.1	321.4	-10.4
36.50	4.55	3.88	0.46	8.89	.28	.22	898	806.6	321.0	-12.0
37.00	4.64	3.67	0.46	8.77	.28	.23	900	807.2	320.6	-13.6
37.50	4.64	3.43	0.45	8.52	.29	.29	898	807.7	320.1	-15.2
37438.00	4.13	3.16	0.44	7.73	-17.33	-17.33	880	808.3	319.7	-16.8
38.20	4.43	3.06	0.43	7.92	.32	.32	883	808.5	319.5	-17.4
38.40	4.90	2.95	0.43	8.28	.30	.31	887	808.7	319.3	-18.1
38.60	5.35	2.85	0.43	8.63	.29	.29	893	808.9	319.1	-18.7
38.80	5.79	2.73	0.42	8.95	.27	.27	899	809.1	318.9	-19.4
39.00	7.57	2.65	0.42	10.64	.20	.20	930	809.3	318.8	-20.0
39.20	9.00	2.54	0.42	11.96	.15	.15	949	809.6	318.6	-20.6
39.40	9.57	2.42	0.42	12.41	.14	.14	953	809.8	318.4	-21.3
39.60	9.62	2.33	0.42	12.37	.14	.14	953	810.0	318.2	-21.9
39.80	8.65	2.22	0.41	11.28	.17	.17	939	810.2	318.0	-22.6
40.00	9.01	2.07	0.41	11.49	.16	.16	944	810.4	317.9	-23.2
40.20	8.86	1.83	0.40	11.10	.18	.17	939	810.6	317.7	-23.8
40.40	8.70	1.57	0.39	10.65	.19	.19	933	810.8	317.5	-24.5
40.60	8.69	1.26	0.39	10.35	.20	.20	927	811.0	317.3	-25.1
40.80	9.18	0.88	0.38	10.44	.20	.20	929	811.2	317.1	-25.7
41.00	9.49	0.45	0.38	10.32	.21	.20	924	811.4	317.0	-26.4
41.20	9.79	-1.06	0.38	9.11	.26	.26	898	811.6	316.8	-27.0
41.40	11.10	-0.32	0.38	11.15	.18	.17	936	811.8	316.6	-27.7
41.60	11.21	-0.42	0.38	11.17	.17	.17	936	812.0	316.5	-28.3
41.80	11.64	-0.43	0.38	11.59	.16	.15	943	812.2	316.3	-28.9
42.00	11.73	-0.43	0.38	11.68	.16	.15	943	812.4	316.1	-29.5
42.20	11.98	-0.43	0.38	11.93	.15	.14	947	812.6	316.0	-30.2
42.40	12.73	-0.43	0.38	12.68	.12	.11	958	812.8	315.8	-30.8
42.60	12.45	-0.43	0.38	12.41	.13	.12	954	813.0	315.6	-31.4
42.80	11.83	-0.43	0.38	11.78	.15	.14	944	813.2	315.5	-32.0
43.00	11.37	-0.43	0.38	11.32	.17	.16	936	813.3	315.3	-32.6
43.20	10.90	-0.43	0.38	10.85	.18	.17	930	813.5	315.2	-33.3
43.40	10.93	-0.43	0.38	10.88	.18	.17	931	813.7	315.0	-33.9
43.60	10.78	-0.43	0.38	10.73	.18	.17	929	813.9	314.9	-34.5
43.80	10.45	-0.43	0.38	10.40	.20	.18	924	814.1	314.8	-35.1
44.00	10.63	-0.43	0.38	10.58	.19	.18	927	814.3	314.6	-35.7
44.20	11.30	-0.43	0.39	11.26	.16	.15	937	814.4	314.5	-36.3
44.40	12.48	-0.43	0.39	12.44	.13	.11	952	814.6	314.4	-36.9
44.60	13.81	-0.43	0.39	13.77	.08	.07	970	814.8	314.3	-37.5
44.80	13.96	-0.43	0.40	13.93	.07	.06	973	815.0	314.1	-38.1
45.00	12.41	-0.43	0.40	12.38	.12	.11	951	815.1	314.0	-38.7
45.20	11.03	-0.43	0.40	11.00	.17	.16	930	815.3	313.9	-39.3
45.40	10.82	-0.43	0.40	10.79	.17	.16	929	815.5	313.8	-39.8
45.60	10.61	-0.43	0.40	10.58	.18	.16	928	815.6	313.7	-40.4

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37446.00	9.54	-0.42	0.40	9.52	-17.22	-17.21	907	815.9	313.6	-41.6
46.50	9.52	-0.40	0.41	9.54	.21	.20	910	816.3	313.4	-43.0
47.00	9.49	-0.39	0.42	9.52	.21	.19	912	816.7	313.2	-44.3
47.50	9.64	-0.36	0.43	9.71	.20	.18	915	817.1	313.1	-45.7
48.00	9.22	-0.34	0.44	9.32	.22	.20	901	817.5	313.1	-47.0
48.50	8.38	-0.33	0.46	8.51	.25	.23	883	817.8	313.0	-48.2
49.00	8.40	-0.32	0.48	8.56	.25	.23	887	818.1	313.1	-49.5
49.50	8.39	-0.32	0.50	8.57	.25	.23	884	818.5	313.1	-50.7
50.00	8.75	-0.30	0.51	8.96	.23	.21	891	818.8	313.3	-51.8
37450.20	8.62	-0.29	0.52	8.85	-17.23	-17.21	889	818.9	313.3	-52.3
50.40	8.70	-0.28	0.52	8.94	.23	.21	888	819.0	313.4	-52.7
50.60	9.45	-0.27	0.53	9.71	.19	.17	906	819.1	313.5	-53.1
50.80	9.87	-0.26	0.54	10.15	.17	.15	915	819.2	313.6	-53.5
51.00	10.12	-0.25	0.54	10.41	.16	.14	921	819.4	313.7	-53.9
51.20	10.71	-0.23	0.55	11.03	.13	.11	936	819.5	313.8	-54.3
51.40	10.62	-0.21	0.56	10.97	.13	.11	936	819.6	313.9	-54.7
51.60	10.20	-0.21	0.56	10.55	.15	.13	925	819.7	314.0	-55.1
51.80	9.11	-0.20	0.57	9.47	.21	.18	895	819.8	314.1	-55.5
52.00	8.69	-0.19	0.58	9.08	.22	.19	887	819.9	314.3	-55.9
52.20	8.78	-0.18	0.58	9.18	.21	.18	895	820.0	314.4	-56.2
52.40	8.88	-0.17	0.59	9.29	.20	.18	899	820.1	314.6	-56.6
52.60	8.80	-0.15	0.60	9.25	.20	.18	896	820.2	314.8	-56.9
52.80	8.39	-0.14	0.60	8.85	.23	.20	882	820.3	314.9	-57.2
37453.00	8.28	-0.13	0.61	8.76	-17.23	-17.20	883	820.4	315.1	-57.6
53.50	8.07	-0.11	0.62	8.58	.23	.20	883	820.6	315.6	-58.3
54.00	7.77	-0.09	0.64	8.32	.24	.21	879	820.8	316.1	-59.0
54.50	7.60	-0.05	0.66	8.21	.24	.21	875	821.0	316.7	-59.6
55.00	7.38	-0.02	0.68	8.04	.25	.22	871	821.2	317.3	-60.1
55.50	7.29	-0.01	0.70	7.98	.25	.22	871	821.4	318.0	-60.6
56.00	7.29	0.00	0.72	8.01	.25	.22	873	821.6	318.6	-60.9
37456.20	7.02	0.10	0.72	7.83	-17.26	-17.23	868	821.7	318.9	-61.1
56.40	8.78	0.32	0.73	9.83	.16	.13	923	821.7	319.2	-61.2
56.60	10.90	0.73	0.74	12.37	.05	.03	975	821.8	319.5	-61.3
56.80	8.50	1.26	0.75	10.51	.13	.10	936	821.9	319.8	-61.4
57.00	6.28	1.77	0.76	8.81	.21	.18	891	821.9	320.1	-61.5
57.20	6.46	2.27	0.77	9.50	.17	.14	912	822.0	320.4	-61.5
57.40	8.68	2.78	0.78	12.24	.06	.03	972	822.0	320.6	-61.6
57.60	8.06	3.24	0.78	12.08	.07	.04	966	822.1	320.9	-61.6
57.80	5.77	3.68	0.79	10.24	.15	.11	926	822.2	321.2	-61.6
58.00	4.35	4.06	0.80	9.21	.19	.16	903	822.2	321.5	-61.6
58.20	3.80	4.47	0.81	9.08	.20	.16	902	822.3	321.8	-61.6
58.40	3.26	4.82	0.82	8.91	.20	.17	898	822.3	322.1	-61.6
58.60	2.92	5.18	0.83	8.93	.20	.17	901	822.4	322.4	-61.6
37459.00	2.24	5.80	0.84	8.88	-17.20	-17.19	904	822.5	323.0	-61.5
59.50	1.57	6.45	0.86	8.88	.19	.19	908	822.6	323.7	-61.3
60.00	0.94	6.99	0.88	8.81	.20	.19	907	822.7	324.3	-61.1
60.50	0.45	7.41	0.90	8.76	.20	.19	908	822.8	325.0	-60.7
61.00	-0.02	7.75	0.92	8.65	.20	.20	909	822.9	325.6	-60.3
61.50	-0.25	8.04	0.94	8.73	.20	.19	915	823.0	326.2	-59.8
62.00	-0.39	8.29	0.96	8.86	.19	.19	918	823.1	326.7	-59.2
62.50	-0.47	8.50	0.98	9.01	.20	.19	919	823.1	327.2	-58.6
63.00	-0.55	8.68	1.00	9.13	.19	.18	925	823.2	327.7	-57.9
63.50	-0.51	8.84	1.01	9.34	.18	.17	935	823.3	328.1	-57.1
64.00	-0.52	9.00	1.02	9.51	.17	.16	941	823.4	328.4	-56.3
64.50	-0.01	9.12	1.04	10.16	.14	.13	957	823.4	328.7	-55.4
65.00	0.42	9.22	1.06	10.70	.13	.12	967	823.5	328.9	-54.5

Table 3 (cont.)

1961 51 (Explorer 9)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37465.50	1.02	9.29	1.07	11.38	-17.11	-17.10	977	823.5	329.1	-53.5
66.00	1.68	9.33	1.08	12.08	.09	.08	989	823.6	329.2	-52.4
66.50	1.79	9.36	1.10	12.25	.08	.07	995	823.6	329.3	-51.3
67.00	2.01	9.39	1.12	12.52	.08	.07	1001	823.7	329.3	-50.2
67.50	1.58	9.40	1.13	12.11	.09	.08	997	823.7	329.3	-49.0
68.00	1.10	9.38	1.14	11.62	.11	.10	991	823.7	329.2	-47.8
68.50	2.93	9.36	1.15	13.44	.05	.04	1019	823.8	329.1	-46.6
69.00	4.07	9.33	1.16	14.55	.03	.01	1035	823.8	329.0	-45.3
69.50	3.70	9.32	1.18	14.19	.04	.02	1032	823.8	328.8	-44.0
70.00	3.35	9.27	1.19	13.81	.05	.04	1030	823.9	328.5	-42.7
70.50	3.07	9.22	1.20	13.48	.06	.05	1028	823.9	328.3	-41.3
37471.00	4.10	9.18	1.21	14.48	-17.03	-17.02	1042	823.9	328.0	-40.0
71.20	4.57	9.14	1.21	14.93	.02	.01	1047	824.0	327.9	-39.4
71.40	6.25	9.12	1.22	16.59	-16.98	-16.96	1067	824.0	327.7	-38.8
71.60	6.98	9.10	1.22	17.30	.96	.95	1075	824.0	327.6	-38.3
71.80	7.52	9.07	1.22	17.81	.95	.93	1081	824.0	327.4	-37.7
72.00	10.08	9.04	1.22	20.34	.89	.88	1105	824.0	327.3	-37.1
72.20	10.44	9.00	1.22	20.66	.88	.86	1111	824.0	327.2	-36.6
72.40	10.61	8.98	1.23	20.82	.88	.86	1113	824.0	327.0	-36.0
72.60	8.24	8.95	1.23	18.42	.94	.92	1090	824.0	326.8	-35.4
72.80	6.19	8.92	1.23	16.34	.99	.97	1069	824.1	326.7	-34.8
73.00	4.98	8.89	1.24	15.11	-17.02	-17.01	1057	824.1	326.5	-34.2
37473.50	2.23	8.79	1.24	12.26	-17.12	-17.10	1022	824.1	326.1	-32.8
74.00	1.27	8.69	1.25	11.22	.16	.14	1009	824.1	325.7	-31.3
74.50	1.48	8.58	1.25	11.31	.15	.14	1012	824.2	325.2	-29.8
75.00	1.00	8.57	1.25	10.81	.17	.16	1007	824.2	324.8	-28.3
75.50	0.35	8.38	1.25	9.98	.21	.20	995	824.2	324.3	-26.8
76.00	0.47	8.27	1.25	9.99	.21	.20	998	824.3	323.8	-25.3
76.50	0.04	8.16	1.24	9.44	.23	.22	992	824.3	323.4	-23.8
77.00	-0.52	8.07	1.23	8.78	.26	.25	983	824.4	322.9	-22.3
77.50	-0.68	7.99	1.22	8.53	.28	.27	979	824.4	322.4	-20.8
78.00	-0.69	7.90	1.21	8.42	.29	.27	981	824.5	321.9	-19.3
37478.20	-1.01	7.87	1.21	8.07	-17.30	-17.29	980	824.5	321.8	-18.7
78.40	-0.77	7.83	1.20	8.26	.29	.28	984	824.5	321.6	-18.0
78.60	-0.69	7.79	1.19	8.29	.29	.28	983	824.5	321.4	-17.4
78.80	-0.45	7.75	1.18	8.49	.28	.27	988	824.6	321.2	-16.8
79.00	0.99	7.72	1.18	9.89	.21	.20	1018	824.6	321.0	-16.2
79.20	1.25	7.69	1.17	10.11	.21	.19	1020	824.6	320.8	-15.6
79.40	0.84	7.64	1.16	9.65	.24	.22	1004	824.6	320.7	-15.0
79.60	-0.24	7.61	1.15	8.52	.29	.27	983	824.7	320.5	-14.4
79.80	-0.47	7.58	1.14	8.25	.30	.29	982	824.7	320.3	-13.8
37480.00	-0.69	7.54	1.14	7.99	-17.32	-17.30	978	824.7	320.2	-13.2
80.50	-0.99	7.46	1.12	7.59	.33	.32	978	824.8	319.7	-11.8
81.00	-1.85	7.40	1.10	6.64	.39	.38	955	824.9	319.4	-10.3
81.50	-2.12	7.32	1.08	6.28	.42	.41	942	824.9	319.0	-8.8
82.00	-2.68	7.26	1.07	5.65	.47	.45	926	825.0	318.6	-7.4
82.50	-2.18	7.18	1.05	6.05	.44	.42	941	825.1	318.3	-6.0
83.00	-1.71	7.12	1.03	6.44	.41	.40	952	825.2	318.0	-4.6
83.50	-1.51	7.08	1.01	6.58	.41	.39	956	825.3	317.8	-3.2
84.00	-1.47	7.01	0.99	6.54	.41	.39	958	825.4	317.6	-1.8
37484.20	-1.54	6.98	0.99	6.43	-17.41	-17.40	958	825.5	317.5	-1.3
84.40	-1.16	6.97	0.98	6.79	.39	.37	969	825.5	317.4	-0.7
84.60	-0.77	6.96	0.97	7.16	.37	.35	978	825.6	317.4	-0.2
84.80	-0.54	6.95	0.96	7.36	.36	.34	981	825.6	317.3	0.3
85.00	0.02	6.94	0.96	7.92	.33	.31	992	825.7	317.2	0.8

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37485.20	2.28	6.90	0.95	10.13	-17.22	-17.19	1031	825.7	317.2	1.4
85.40	2.85	6.89	0.94	10.69	.19	.16	1041	825.8	317.2	1.9
85.60	2.25	6.87	0.93	10.05	.22	.20	1031	825.9	317.1	2.4
85.80	0.97	6.86	0.92	8.75	.26	.26	1010	825.9	317.1	2.9
86.00	0.37	6.86	0.92	8.15	.31	.29	999	826.0	317.1	3.4
86.20	0.11	6.85	0.91	7.87	.33	.30	994	826.0	317.1	3.9
86.40	0.03	6.83	0.90	7.75	.33	.31	992	826.1	317.1	4.3
86.60	-0.23	6.81	0.89	7.47	.35	.33	988	826.2	317.1	4.8
86.80	-0.48	6.79	0.88	7.19	.37	.34	982	826.2	317.1	5.3
37487.00	-0.54	6.76	0.88	7.10	-17.37	-17.35	981	826.3	317.1	5.8
87.50	-0.38	6.75	0.86	7.23	.36	.34	985	826.5	317.2	6.9
88.00	-0.39	6.72	0.84	7.17	.37	.34	987	826.6	317.4	8.0
88.50	-0.14	6.70	0.82	7.38	.35	.33	993	826.8	317.6	9.0
89.00	0.02	6.68	0.80	7.49	.35	.32	996	827.0	317.8	10.0
89.50	0.22	6.66	0.77	7.65	.34	.31	1000	827.3	318.1	11.0
90.00	0.69	6.65	0.75	8.08	.31	.29	1010	827.5	318.5	11.9
90.50	0.87	6.64	0.73	8.24	.30	.27	1013	827.7	318.9	12.7
91.00	1.27	6.61	0.71	8.59	.28	.25	1021	828.0	319.3	13.5
91.50	1.44	6.57	0.69	8.70	.28	.25	1024	828.2	319.8	14.2
92.00	1.80	6.55	0.67	9.02	.26	.23	1031	828.5	320.4	14.8
92.50	2.42	6.54	0.65	9.61	.23	.20	1041	828.8	320.9	15.4
93.00	2.98	6.53	0.63	10.14	.21	.17	1050	829.1	321.6	15.9
37493.20	2.74	6.52	0.62	9.87	-17.22	-17.19	1047	829.2	321.8	16.1
93.40	3.10	6.51	0.62	10.22	.21	.17	1052	829.3	322.1	16.3
93.60	3.63	6.50	0.61	10.74	.17	.13	1063	829.4	322.3	16.4
93.80	6.02	6.49	0.60	13.11	.05	.01	1106	829.5	322.6	16.6
94.00	9.43	6.47	0.60	16.51	-16.93	-16.88	1150	829.7	322.9	16.7
94.20	13.01	6.46	0.58	20.06	.87	.82	1172	829.8	323.2	16.8
94.40	13.39	6.44	0.58	20.42	.88	.83	1169	829.9	323.5	16.9
94.60	14.11	6.43	0.57	21.11	.85	.80	1180	830.1	323.7	17.0
94.80	17.03	6.43	0.56	24.02	.77	.72	1210	830.2	324.0	17.1
95.00	17.42	6.43	0.56	24.41	.78	.73	1207	830.3	324.3	17.2
95.20	4.64	6.42	0.55	11.61	-17.12	-17.08	1083	830.5	324.6	17.2
95.40	-0.02	6.41	0.54	6.93	.36	.31	1002	830.6	324.9	17.3
95.60	3.92	6.40	0.53	10.85	.16	.12	1069	830.8	325.2	17.3
95.80	5.17	6.38	0.52	12.06	.12	.07	1085	830.9	325.5	17.3
96.00	7.26	6.36	0.52	14.14	.05	.00	1110	831.1	325.8	17.4
96.20	7.33	6.34	0.51	14.18	.04	-16.99	1114	831.2	326.1	17.4
96.40	7.07	6.32	0.50	13.89	.05	-17.00	1110	831.4	326.3	17.3
96.60	5.63	6.31	0.49	12.43	.11	.06	1090	831.5	326.6	17.3
96.80	4.86	6.29	0.48	11.64	.14	.09	1080	831.7	326.9	17.3
97.00	4.61	6.26	0.48	11.35	.15	.09	1077	831.8	327.2	17.2
97.20	4.53	6.23	0.47	11.23	.15	.10	1075	832.0	327.5	17.2
97.40	4.62	6.21	0.46	11.29	.15	.10	1075	832.1	327.8	17.1
97.60	5.72	6.19	0.46	12.37	.11	.06	1089	832.3	328.0	17.0
97.80	6.66	6.15	0.45	13.27	.08	.03	1101	832.5	328.3	16.9
98.00	7.62	6.12	0.44	14.18	.04	-16.99	1115	832.6	328.6	16.8
98.20	8.64	6.11	0.44	15.19	.00	.94	1130	832.8	328.8	16.7
98.40	10.16	6.10	0.43	16.69	-16.96	.90	1146	833.0	329.1	16.5
98.60	11.18	6.07	0.42	17.67	.93	.87	1155	833.1	329.3	16.4
98.80	12.19	6.02	0.42	18.63	.90	.84	1167	833.3	329.6	16.2
99.00	13.19	6.00	0.41	19.61	.88	.82	1176	833.5	329.8	16.1
99.20	10.48	5.99	0.40	16.87	.95	.89	1149	833.6	330.0	15.9
99.40	8.94	5.97	0.40	15.32	-17.01	.95	1129	833.8	330.3	15.7
99.60	8.59	5.94	0.39	14.92	.04	.98	1118	834.0	330.5	15.5
99.80	7.72	5.91	0.39	14.02	.07	-17.02	1107	834.2	330.7	15.3
37500.00	5.33	5.90	0.38	11.60	.15	.10	1078	834.4	330.9	15.1
00.20	3.95	5.85	0.38	10.18	.21	.15	1058	834.5	331.1	14.8

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37500.40	2.05	5.79	0.37	8.21	-17.30	-17.24	1026	834.7	331.3	14.6
00.60	2.52	5.77	0.36	8.65	.28	.22	1034	834.9	331.5	14.3
00.80	4.34	5.70	0.36	10.40	.20	.14	1062	835.1	331.6	14.1
01.00	6.82	5.68	0.35	12.85	.10	.04	1096	835.3	331.8	13.8
01.20	9.14	5.66	0.34	15.14	.02	-16.96	1125	835.5	332.0	13.5
01.40	9.25	5.61	0.34	15.20	.02	.95	1128	835.7	332.1	13.2
01.60	9.37	5.57	0.34	15.28	.02	.95	1126	835.9	332.2	12.9
01.80	8.47	5.54	0.33	14.34	.06	.99	1113	836.1	332.4	12.6
02.00	6.21	5.49	0.32	12.02	.14	-17.07	1086	836.3	332.5	12.3
02.20	4.63	5.47	0.32	10.42	.20	.13	1063	836.5	332.6	12.0
02.40	3.38	5.42	0.32	9.13	.26	.19	1041	836.7	332.7	11.6
02.60	3.31	5.37	0.31	9.00	.27	.20	1039	836.9	332.8	11.3
02.80	3.41	5.35	0.30	9.06	.27	.20	1040	837.1	332.9	10.9
03.00	3.34	5.28	0.30	8.93	.28	.21	1037	837.3	333.0	10.6
37503.50	4.50	5.17	0.29	9.95	-17.23	-17.27	1053	837.8	333.2	9.7
04.00	5.41	5.05	0.28	10.73	.20	.24	1066	838.3	333.3	8.7
04.50	5.36	4.93	0.27	10.56	.20	.25	1063	838.8	333.4	7.7
05.00	5.13	4.80	0.26	10.19	.22	.26	1056	839.3	333.4	6.6
05.50	4.94	4.67	0.26	9.88	.24	.27	1051	839.9	333.4	5.5
06.00	4.84	4.53	0.26	9.64	.25	.28	1047	840.4	333.3	4.4
06.50	4.83	4.40	0.26	9.48	.26	.29	1043	840.9	333.2	3.3
37506.60	4.58	4.38	0.25	9.21	-17.27	-17.30	1038	841.0	333.2	3.0
06.80	4.66	4.31	0.25	9.22	.27	.30	1039	841.2	333.1	2.6
07.00	4.75	4.28	0.25	9.28	.27	.30	1039	841.5	333.1	2.1
07.20	9.06	4.20	0.25	13.52	.10	.13	1101	841.7	333.0	1.6
07.40	16.08	4.17	0.25	20.50	-16.92	-16.95	1170	841.9	332.9	1.1
07.60	17.35	4.11	0.25	21.71	.87	.91	1187	842.1	332.8	0.6
07.80	16.94	4.06	0.24	21.24	.88	.92	1183	842.3	332.8	0.1
08.00	10.12	4.00	0.24	14.36	-17.07	-17.10	1115	842.5	332.7	-0.3
08.20	5.15	3.96	0.24	9.35	.25	.28	1045	842.7	332.6	-0.8
08.40	2.72	3.88	0.24	6.84	.40	.43	988	843.0	332.5	-1.3
08.60	2.66	3.84	0.24	6.74	.41	.43	983	843.2	332.4	-1.9
08.80	2.76	3.77	0.24	6.78	.41	.43	984	843.4	332.3	-2.4
09.00	2.70	3.72	0.24	6.66	.42	.44	980	843.6	332.1	-2.9
37509.50	2.57	3.57	0.24	6.38	-17.44	-17.45	972	844.1	331.8	-4.2
10.00	2.34	3.43	0.24	6.01	.46	.48	961	844.7	331.5	-5.5
10.50	2.23	3.29	0.24	5.77	.48	.49	953	845.2	331.2	-6.8
11.00	2.28	3.14	0.23	5.65	.49	.50	949	845.7	330.8	-8.1
11.50	2.24	3.01	0.23	5.49	.50	.51	944	846.2	330.4	-9.5
12.00	2.23	2.89	0.23	5.35	.51	.52	937	846.8	330.0	-10.8
12.50	2.23	2.77	0.23	5.23	.52	.52	932	847.3	329.6	-12.2
37512.60	2.62	2.74	0.23	5.60	-17.49	-17.49	946	847.4	329.5	-12.4
12.80	2.96	2.68	0.23	5.87	.46	.47	960	847.6	329.3	-13.0
13.00	3.64	2.66	0.23	6.52	.42	.42	979	847.8	329.1	-13.5
13.20	4.32	2.59	0.23	7.14	.38	.39	987	848.0	329.0	-14.1
13.40	4.67	2.56	0.23	7.46	.37	.38	990	848.2	328.8	-14.6
13.60	4.85	2.49	0.23	7.57	.36	.37	992	848.4	328.6	-15.2
13.80	5.71	2.47	0.23	8.41	.32	.32	1013	848.5	328.5	-15.7
14.00	5.40	2.41	0.23	8.04	.33	.34	1006	848.7	328.3	-16.3
14.20	5.09	2.36	0.23	7.67	.35	.35	1000	848.9	328.1	-16.8
14.40	4.44	2.33	0.23	7.00	.39	.39	982	849.1	327.9	-17.3
14.60	4.31	2.27	0.23	6.81	.40	.41	975	849.3	327.8	-17.9
14.80	4.35	2.24	0.24	6.83	.40	.40	976	849.5	327.6	-18.4
15.00	4.22	2.20	0.24	6.66	.41	.41	971	849.7	327.4	-19.0

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37515.50	4.13	2.10	0.24	6.47	-17.42	-17.42	962	850.1	327.0	-20.4
16.00	3.94	1.99	0.24	6.17	.44	.44	955	850.6	326.6	-21.7
16.50	3.91	1.89	0.24	6.04	.44	.44	952	851.0	326.1	-23.1
17.00	4.00	1.77	0.25	6.02	.44	.44	950	851.5	325.7	-24.4
17.50	4.21	1.65	0.25	6.11	.43	.43	954	851.9	325.4	-25.8
18.00	4.62	1.54	0.26	6.42	.41	.40	965	852.3	325.0	-27.1
18.50	4.45	1.40	0.27	6.12	.43	.42	955	852.7	324.6	-28.4
19.00	5.50	1.18	0.28	6.96	.37	.36	980	853.1	324.3	-29.7
19.50	6.81	0.81	0.29	7.92	.32	.31	998	853.5	324.0	-31.0
20.00	7.73	0.30	0.30	8.33	.30	.29	1005	853.8	323.7	-32.2
20.50	7.81	-0.19	0.31	7.93	.31	.30	998	854.2	323.4	-33.5
21.00	8.58	-0.34	0.32	8.56	.28	.27	1015	854.5	323.2	-34.7
21.50	9.95	-0.38	0.33	9.90	.22	.21	1037	854.8	323.0	-35.9
22.00	11.17	-0.34	0.34	11.17	.17	.16	1056	855.1	322.9	-37.1
22.50	11.67	-0.32	0.35	11.70	.15	.13	1062	855.4	322.8	-38.2
23.00	11.06	-0.31	0.36	11.11	.17	.16	1051	855.7	322.7	-39.3
23.50	11.03	-0.28	0.37	11.12	.17	.15	1054	856.0	322.7	-40.4
24.00	10.63	-0.24	0.38	10.78	.18	.16	1048	856.3	322.7	-41.5
24.50	9.47	-0.21	0.39	9.65	.22	.20	1027	856.5	322.8	-42.5
25.00	9.06	-0.20	0.40	9.25	.23	.22	1023	856.8	322.9	-43.4
25.50	10.33	-0.17	0.42	10.58	.18	.16	1046	857.0	323.1	-44.3
26.00	11.62	-0.13	0.43	11.92	.13	.11	1066	857.2	323.3	-45.2
26.50	11.87	-0.11	0.44	12.20	.11	.10	1070	857.4	323.6	-46.0
27.00	10.62	-0.10	0.45	10.98	.16	.14	1049	857.6	323.9	-46.8
27.50	10.01	-0.06	0.46	10.40	.18	.16	1041	857.7	324.3	-47.5
28.00	9.73	-0.04	0.48	10.17	.18	.16	1040	857.9	324.8	-48.1
28.50	9.86	-0.03	0.49	10.32	.17	.15	1041	858.1	325.3	-48.7
29.00	9.98	-0.02	0.50	10.46	.17	.15	1044	858.2	325.8	-49.3
29.50	10.11	-0.01	0.52	10.62	.16	.14	1046	858.3	326.4	-49.7
30.00	10.51	0.00	0.53	11.04	.14	.12	1053	858.4	327.0	-50.1
30.50	11.30	0.00	0.55	11.85	.11	.09	1065	858.5	327.7	-50.4
31.00	10.81	0.15	0.56	11.52	.12	.10	1062	858.6	328.4	-50.6
31.50	8.89	0.64	0.57	10.10	.18	.15	1037	858.7	329.2	-50.8
32.00	7.57	1.62	0.59	9.78	.19	.17	1028	858.7	329.9	-50.9
32.50	6.67	2.57	0.60	9.85	.19	.16	1031	858.8	330.7	-50.8
33.00	5.03	3.30	0.62	8.95	.22	.20	1014	858.8	331.5	-50.8
33.50	3.70	3.84	0.63	8.17	.26	.24	997	858.9	332.3	-50.6
34.00	3.11	4.36	0.65	8.13	.26	.24	997	858.9	333.1	-50.4
34.50	2.65	4.79	0.66	8.10	.26	.24	995	858.9	333.9	-50.0
35.00	1.78	5.15	0.68	7.61	.29	.27	982	858.9	334.6	-49.6
35.50	1.66	5.48	0.70	7.84	.27	.25	988	858.9	335.4	-49.1
36.00	1.86	5.72	0.72	8.31	.25	.23	997	858.8	336.1	-48.6
36.50	1.60	5.90	0.74	8.24	.26	.24	993	858.8	336.8	-47.9
37.00	1.13	6.08	0.75	7.96	.27	.25	985	858.7	337.4	-47.2
37.50	1.00	6.22	0.76	7.98	.27	.25	985	858.7	338.0	-46.4
38.00	1.43	6.32	0.78	8.54	.24	.22	999	858.6	338.6	-45.6
38.50	1.17	6.45	0.80	8.43	.25	.23	997	858.5	339.1	-44.7
39.00	1.00	6.56	0.82	8.38	.25	.23	997	858.5	339.6	-43.7
39.50	0.51	6.62	0.83	7.97	.27	.25	988	858.4	340.0	-42.6
40.00	0.32	6.65	0.85	7.82	.28	.26	984	858.3	340.3	-41.5
37540.20	-0.28	6.65	0.86	7.23	-17.31	-17.29	966	858.2	340.4	-41.1
40.40	-0.47	6.65	0.86	7.04	.32	.30	961	858.2	340.6	-40.6
40.60	-0.48	6.65	0.87	7.03	.32	.30	961	858.2	340.7	-40.2
40.80	-0.16	6.65	0.88	7.37	.31	.29	967	858.1	340.8	-39.7
41.00	0.35	6.64	0.89	7.87	.29	.27	974	858.1	340.9	-39.2
41.20	1.36	6.62	0.90	8.88	.24	.22	997	858.0	340.9	-38.7
41.40	2.54	6.61	0.91	10.07	.18	.16	1022	858.0	341.0	-38.2
41.60	3.56	6.59	0.92	11.08	.14	.12	1041	857.9	341.1	-37.7
41.80	4.08	6.57	0.92	11.57	.13	.10	1047	857.9	341.1	-37.2

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37542.00	3.42	6.56	0.93	10.91	-17.15	-17.13	1036	857.8	341.2	-36.7
42.20	2.43	6.54	0.94	9.91	.19	.17	1018	857.8	341.2	-36.1
42.40	1.95	6.53	0.94	9.42	.22	.19	1008	857.7	341.3	-35.6
42.60	1.81	6.51	0.95	9.27	.22	.20	1005	857.7	341.3	-35.1
42.80	1.67	6.49	0.96	9.12	.23	.21	1002	857.6	341.3	-34.5
37543.00	1.62	6.46	0.97	9.05	-17.23	-17.21	1000	857.6	341.3	-34.0
43.50	1.59	6.41	0.98	8.98	.24	.21	999	857.4	341.3	-32.5
44.00	1.17	6.34	0.99	8.49	.26	.24	988	857.3	341.3	-31.1
44.50	0.82	6.25	1.00	8.07	.28	.26	977	857.2	341.2	-29.6
45.00	0.93	6.15	1.01	8.09	.28	.26	978	857.0	341.1	-28.1
45.50	0.75	6.07	1.02	7.84	.29	.27	972	856.9	340.9	-26.6
46.00	0.56	5.95	1.02	7.53	.31	.29	964	856.7	340.7	-25.1
46.50	0.95	5.81	1.02	7.78	.29	.28	971	856.6	340.5	-23.5
47.00	1.30	5.67	1.02	7.99	.29	.27	975	856.4	340.2	-21.9
47.50	1.84	5.53	1.01	8.38	.27	.25	983	856.3	340.0	-20.3
48.00	2.13	5.39	1.00	8.52	.26	.24	985	856.2	339.7	-18.7
48.50	2.59	5.26	0.99	8.84	.24	.22	992	856.0	339.3	-17.0
49.00	2.82	5.12	0.98	8.92	.23	.22	996	855.9	339.0	-15.4
49.50	3.00	4.97	0.97	8.94	.23	.22	996	855.7	338.6	-13.7
50.00	3.46	4.83	0.96	9.25	.22	.20	1001	855.6	338.3	-12.0
50.50	3.77	4.70	0.95	9.41	.21	.19	1004	855.5	337.9	-10.4
51.00	4.28	4.52	0.94	9.74	.20	.18	1008	855.4	337.5	-8.7
51.50	5.17	4.37	0.92	10.46	.17	.15	1018	855.2	337.1	-7.0
52.00	6.29	4.21	0.90	11.40	.13	.12	1032	855.1	336.7	-5.3
52.50	6.53	4.07	0.88	11.48	.13	.11	1033	855.0	336.3	-3.6
53.00	6.40	3.97	0.86	11.22	.14	.12	1028	854.9	335.9	-1.9
53.50	6.49	3.85	0.84	11.18	.14	.13	1026	854.8	335.5	-0.2
37553.60	6.05	3.82	0.84	10.71	-17.16	-17.14	1018	854.8	335.4	0.1
53.80	6.52	3.76	0.83	11.12	.14	.13	1024	854.7	335.3	0.8
54.00	7.34	3.73	0.82	11.89	.12	.10	1036	854.7	335.1	1.4
54.20	7.65	3.68	0.81	12.13	.11	.09	1039	854.6	335.0	2.1
54.40	8.29	3.63	0.80	12.73	.09	.07	1047	854.6	334.8	2.8
54.60	7.59	3.59	0.79	11.97	.11	.10	1037	854.6	334.7	3.5
54.80	6.55	3.54	0.78	10.87	.15	.14	1018	854.5	334.5	4.1
55.00	6.86	3.51	0.76	11.13	.14	.13	1022	854.5	334.4	4.8
55.20	7.01	3.44	0.76	11.21	.14	.12	1023	854.5	334.2	5.4
55.40	5.80	3.41	0.75	9.96	.19	.18	1001	854.4	334.1	6.1
55.60	6.29	3.37	0.74	10.39	.17	.16	1009	854.4	334.0	6.8
55.80	6.77	3.32	0.73	10.82	.15	.14	1016	854.4	333.8	7.4
56.00	7.09	3.27	0.72	11.08	.14	.13	1019	854.4	333.7	8.1
56.20	8.41	3.24	0.71	12.36	.10	.08	1038	854.3	333.6	8.7
56.40	8.90	3.21	0.70	12.80	.08	.07	1044	854.3	333.4	9.4
56.60	8.54	3.15	0.69	12.38	.10	.08	1038	854.3	333.3	10.0
56.80	8.01	3.11	0.68	11.80	.12	.10	1030	854.3	333.2	10.7
37557.00	8.14	3.08	0.67	11.89	-17.11	-17.10	1030	854.2	333.1	11.3
57.50	7.47	2.99	0.64	11.10	.14	.13	1016	854.2	332.8	12.9
58.00	7.35	2.89	0.62	10.86	.15	.14	1011	854.1	332.6	14.5
58.50	7.44	2.82	0.60	10.86	.15	.14	1010	854.1	332.4	16.1
59.00	7.49	2.76	0.58	10.82	.15	.14	1008	854.1	332.2	17.6
59.50	7.61	2.69	0.56	10.86	.15	.14	1008	854.0	332.1	19.1
60.00	6.81	2.65	0.54	10.00	.18	.17	992	854.0	332.0	20.6
60.50	5.93	2.57	0.52	9.02	.23	.22	972	854.0	331.9	22.1
61.00	5.66	2.54	0.50	8.70	.24	.23	965	854.0	331.9	23.5
61.50	5.33	2.50	0.48	8.31	.26	.25	957	854.0	331.9	24.9
62.00	4.99	2.48	0.46	7.92	.28	.27	946	854.0	332.0	26.2
62.50	4.80	2.47	0.45	7.72	.29	.28	938	854.1	332.1	27.5
63.00	4.65	2.45	0.44	7.55	.30	.29	931	854.1	332.3	28.8

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37563.50	4.53	2.44	0.43	7.40	-17.30	-17.29	929	854.1	332.5	30.0
64.00	4.25	2.43	0.42	7.11	.32	.30	922	854.2	332.8	31.2
64.50	3.54	2.44	0.41	6.39	.36	.35	896	854.2	333.1	32.3
65.00	3.38	2.45	0.40	6.23	.37	.36	887	854.3	333.5	33.4
37565.20	2.94	2.47	0.40	5.81	-17.40	-17.47	870	854.3	333.6	33.8
65.40	2.75	2.47	0.40	5.61	.41	.47	865	854.3	333.8	34.2
65.60	3.23	2.48	0.40	6.11	.38	.43	886	854.4	334.0	34.6
65.80	3.22	2.49	0.40	6.10	.38	.44	884	854.4	334.2	35.0
66.00	4.05	2.50	0.40	6.94	.32	.38	912	854.4	334.4	35.4
66.20	4.03	2.52	0.40	6.95	.32	.38	910	854.5	334.6	35.7
66.40	4.53	2.54	0.40	7.47	.29	.35	924	854.5	334.8	36.1
66.60	5.71	2.56	0.40	8.67	.23	.30	948	854.5	335.0	36.4
66.80	5.70	2.57	0.40	8.67	.24	.32	942	854.6	335.2	36.8
67.00	6.21	2.57	0.40	9.18	.21	.29	954	854.6	335.5	37.1
67.20	5.87	2.60	0.40	8.88	.23	.30	947	854.7	335.7	37.4
67.40	5.54	2.63	0.40	8.57	.24	.32	939	854.7	336.0	37.7
67.60	5.21	2.66	0.41	8.28	.26	.33	931	854.7	336.2	38.0
67.80	4.55	2.68	0.41	7.64	.29	.36	914	854.8	336.5	38.3
68.00	4.23	2.70	0.41	7.34	.30	.37	906	854.8	336.8	38.5
68.20	4.07	2.72	0.41	7.21	.31	.38	902	854.9	337.0	38.8
68.40	3.92	2.78	0.41	7.11	.32	.38	898	854.9	337.3	39.0
68.60	3.61	2.80	0.42	6.83	.33	.40	890	855.0	337.6	39.3
68.80	4.48	2.82	0.42	7.72	.28	.35	915	855.0	337.9	39.5
69.00	5.01	2.87	0.42	8.30	.25	.32	929	855.1	338.2	39.7
37569.50	4.12	2.96	0.42	7.50	-17.29	-17.37	904	855.2	338.9	40.1
70.00	3.78	3.07	0.42	7.27	.31	.37	898	855.3	339.7	40.5
70.50	3.56	3.17	0.42	7.16	.30	.36	900	855.5	340.5	40.8
71.00	3.57	3.29	0.43	7.29	.30	.36	902	855.6	341.2	41.1
71.50	3.44	3.42	0.43	7.29	.30	.36	898	855.8	342.0	41.2
37572.00	3.28	3.55	0.43	7.26	-17.30	-17.36	896	856.0	342.8	41.3
72.20	3.50	3.60	0.43	7.53	.28	.34	903	856.0	343.1	41.3
72.40	3.55	3.66	0.43	7.63	.28	.34	903	856.1	343.4	41.3
72.60	3.94	3.71	0.43	8.08	.25	.32	915	856.2	343.7	41.2
72.80	8.71	3.76	0.43	12.90	.05	.11	1012	856.2	344.0	41.2
73.00	17.19	3.82	0.43	21.44	-16.83	-16.90	1100	856.3	344.3	41.2
73.20	18.08	3.86	0.43	22.37	.81	.90	1106	856.4	344.6	41.1
73.40	14.09	3.91	0.43	18.43	.88	.97	1083	856.5	344.9	41.0
73.60	14.13	3.97	0.43	18.53	.89	.98	1077	856.5	345.1	41.0
73.80	13.00	4.01	0.43	17.44	.92	-17.00	1059	856.6	345.4	40.9
74.00	6.81	4.06	0.43	11.30	-17.11	.17	980	856.7	345.7	40.8
74.20	3.82	4.11	0.43	8.35	.24	.30	919	856.8	345.9	40.6
74.40	2.51	4.16	0.43	7.10	.30	.36	883	856.9	346.2	40.5
74.60	2.55	4.19	0.42	7.16	.30	.36	885	857.0	346.4	40.4
74.80	2.59	4.23	0.42	7.25	.30	.36	885	857.0	346.7	40.2
37575.00	2.52	4.29	0.42	7.22	-17.30	-17.35	885	857.1	346.9	40.1
75.50	3.36	4.37	0.42	8.15	.24	.30	912	857.3	347.5	39.6
76.00	4.49	4.46	0.41	9.36	.18	.24	941	857.6	348.0	39.1
76.50	4.92	4.52	0.40	9.85	.16	.22	950	857.8	348.5	38.5
77.00	5.16	4.60	0.40	10.15	.15	.21	954	858.0	348.9	37.9
77.50	5.17	4.64	0.39	10.20	.15	.20	955	858.3	349.2	37.2
78.00	5.46	4.68	0.38	10.52	.13	.18	962	858.5	349.5	36.4
78.50	5.65	4.72	0.38	10.75	.12	.18	964	858.8	349.8	35.6
79.00	5.94	4.72	0.37	11.03	.12	.17	966	859.0	350.0	34.8
79.50	6.15	4.73	0.36	11.23	.11	.16	969	859.3	350.1	33.9
80.00	6.40	4.74	0.35	11.49	.09	.15	976	859.6	350.2	33.0
80.50	6.49	4.73	0.34	11.56	.09	.14	976	859.8	350.3	32.0

Table 3 (cont.)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37581.00	6.53	4.72	0.33	11.58	-17.09	-17.15	975	860.1	350.3	31.0
81.50	6.36	4.68	0.32	11.36	.10	.15	973	860.4	350.3	29.9
82.00	6.31	4.63	0.31	11.25	.10	.15	972	860.7	350.2	28.9
82.50	6.32	4.60	0.30	11.22	.10	.15	971	861.0	350.1	27.8
83.00	6.49	4.52	0.29	11.31	.10	.15	970	861.3	349.9	26.6
37583.20	6.83	4.51	0.29	11.63	-17.09	-17.14	974	861.4	349.8	26.2
83.40	6.97	4.49	0.29	11.76	.09	.14	976	861.5	349.8	25.7
83.60	7.79	4.47	0.28	12.54	.07	.12	987	861.7	349.7	25.2
83.80	8.77	4.44	0.28	13.49	.04	.09	1000	861.8	349.6	24.7
84.00	9.41	4.42	0.28	14.11	.02	.07	1009	861.9	349.5	24.3
84.20	9.71	4.40	0.28	14.38	.01	.07	1012	862.0	349.4	23.8
84.40	10.00	4.37	0.28	14.65	.00	.06	1016	862.2	349.3	23.3
84.60	9.61	4.34	0.28	14.24	.02	.07	1010	862.3	349.2	22.8
84.80	9.56	4.31	0.28	14.15	.02	.07	1009	862.4	349.1	22.3
85.00	9.34	4.29	0.27	13.90	.02	.08	1006	862.5	349.0	21.8
85.20	9.11	4.27	0.27	13.65	.03	.08	1003	862.7	348.8	21.4
85.40	8.88	4.21	0.26	13.36	.04	.10	999	862.8	348.7	20.9
85.60	8.48	4.18	0.26	12.92	.06	.11	993	862.9	348.6	20.4
85.80	8.08	4.15	0.26	12.49	.07	.12	987	863.0	348.5	19.9
86.00	7.67	4.12	0.26	12.05	.09	.13	980	863.2	348.3	19.3
37586.50	6.92	4.02	0.25	11.19	-17.12	-17.17	966	863.5	348.0	18.1
87.00	6.43	3.93	0.24	10.60	.14	.18	958	863.8	347.6	16.8
87.50	5.77	3.84	0.24	9.85	.17	.21	945	864.1	347.2	15.5
88.00	5.24	3.74	0.23	9.21	.20	.24	932	864.5	346.8	14.2
88.50	4.73	3.63	0.23	8.60	.23	.27	919	864.8	346.4	12.9
89.00	4.20	3.54	0.22	7.96	.26	.30	904	865.1	346.0	11.6
89.50	3.97	3.43	0.22	7.62	.28	.31	896	865.5	345.6	10.3
90.00	3.90	3.33	0.22	7.46	.29	.32	891	865.8	345.2	9.0
90.50	4.09	3.23	0.21	7.53	.29	.32	893	866.2	344.8	7.6
91.00	4.80	3.14	0.21	8.15	.25	.29	911	866.5	344.3	6.3
91.50	4.85	3.03	0.20	8.09	.26	.29	911	866.8	343.9	5.0
92.00	5.38	2.95	0.20	8.53	.24	.28	920	867.2	343.5	3.7
92.50	5.42	2.85	0.21	8.48	.25	.28	919	867.5	343.1	2.4
93.00	5.37	2.78	0.22	8.37	.25	.28	921	867.8	342.8	1.1
93.50	5.06	2.68	0.22	7.96	.27	.30	912	868.2	342.4	-0.2
94.00	4.77	2.60	0.22	7.60	.29	.32	901	868.5	342.1	-1.5
94.50	4.34	2.59	0.22	7.15	.32	.35	889	868.8	341.8	-2.7
95.00	4.71	2.51	0.23	7.44	.30	.32	904	869.2	341.5	-4.0
95.50	3.92	2.43	0.23	6.59	.35	.37	879	869.5	341.2	-5.2
96.00	3.63	2.36	0.24	6.23	.38	.40	863	869.8	341.0	-6.4
96.50	3.44	2.29	0.24	5.98	.40	.42	855	870.1	340.7	-7.6
97.00	4.19	2.25	0.24	6.68	.34	.37	888	870.5	340.6	-8.8
97.50	4.36	2.19	0.25	6.79	.34	.36	892	870.8	340.4	-9.9
37597.60	4.29	2.18	0.25	6.71	-17.34	-17.36	891	870.8	340.4	-10.1
97.80	4.17	2.15	0.25	6.57	.36	.38	882	871.0	340.4	-10.6
98.00	4.57	2.14	0.25	6.96	.34	.36	893	871.1	340.3	-11.0
98.20	5.98	2.14	0.25	8.38	.26	.28	934	871.2	340.3	-11.5
98.40	6.56	2.12	0.25	8.94	.23	.25	946	871.3	340.3	-11.9
98.60	5.97	2.10	0.26	8.33	.26	.29	930	871.5	340.3	-12.3
98.80	5.39	2.07	0.26	7.72	.29	.32	916	871.6	340.3	-12.8
99.00	6.32	2.06	0.26	8.64	.25	.27	939	871.7	340.3	-13.2
99.20	6.76	2.06	0.26	9.08	.23	.25	948	871.8	340.3	-13.6
99.40	6.87	2.05	0.26	9.18	.22	.25	951	871.9	340.3	-14.0
99.60	6.48	2.05	0.26	8.78	.24	.26	943	872.0	340.3	-14.4
99.80	6.25	2.04	0.26	8.55	.25	.27	941	872.2	340.4	-14.8
37600.00	6.21	2.04	0.26	8.50	.25	.27	940	872.3	340.4	-15.2
00.20	5.99	2.04	0.26	8.29	.26	.28	935	872.4	340.5	-15.5

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37600.40	7.47	2.04	0.26	9.77	-17.19	-17.21	971	872.5	340.5	-15.9
00.60	17.21	2.03	0.26	19.49	-16.90	-16.92	1092	872.6	340.6	-16.3
00.80	31.50	2.02	0.26	33.78	.65	.68	1183	872.7	340.6	-16.6
01.00	29.78	2.02	0.26	32.06	.66	.69	1183	872.8	340.7	-17.0
01.20	13.74	2.02	0.26	16.01	.98	-17.00	1061	872.9	340.8	-17.3
01.40	12.02	2.02	0.26	14.30	-17.03	.05	1039	873.1	340.9	-17.7
01.60	9.13	2.02	0.26	11.40	.13	.15	999	873.2	341.0	-18.0
01.80	4.38	2.02	0.27	6.67	.36	.37	894	873.3	341.1	-18.3
02.00	5.37	2.02	0.27	7.65	.29	.31	933	873.4	341.3	-18.6
02.20	5.68	2.02	0.27	7.97	.27	.29	944	873.5	341.4	-18.9
02.40	4.48	2.02	0.27	6.76	.34	.36	910	873.6	341.5	-19.2
37602.50	4.47	2.02	0.27	6.75	-17.35	-17.36	906	873.6	341.6	-19.4
03.00	4.06	2.03	0.27	6.35	.37	.39	893	873.9	342.0	-20.1
03.50	3.60	2.03	0.28	5.90	.40	.42	879	874.1	342.4	-20.7
04.00	3.81	2.04	0.28	6.13	.39	.40	890	874.3	342.9	-21.2
04.50	3.33	2.04	0.28	5.64	.42	.44	872	874.6	343.5	-21.7
05.00	3.76	2.05	0.28	6.08	.39	.40	892	874.8	344.1	-22.2
05.50	4.03	2.08	0.28	6.39	.37	.38	904	875.0	344.7	-22.5
06.00	4.01	2.10	0.28	6.39	.37	.38	904	875.2	345.4	-22.8
06.50	3.64	2.11	0.28	6.03	.39	.41	894	875.4	346.1	-23.0
07.00	2.99	2.12	0.28	5.39	.44	.45	870	875.5	346.8	-23.2
07.50	3.85	2.14	0.28	6.27	.38	.39	909	875.7	347.6	-23.2
08.00	3.94	2.17	0.28	6.39	.37	.38	909	875.9	348.3	-23.2
08.50	4.69	2.17	0.28	7.14	.33	.34	927	876.0	349.1	-23.1
09.00	5.27	2.15	0.28	7.71	.30	.31	943	876.1	349.9	-23.0
09.50	5.49	2.14	0.28	7.91	.29	.30	949	876.3	350.7	-22.7
37609.60	5.70	2.14	0.28	8.12	-17.28	-17.29	953	876.3	350.8	-22.6
09.80	5.55	2.14	0.28	7.97	.28	.29	952	876.3	351.1	-22.5
10.00	4.89	2.14	0.28	7.31	.31	.32	940	876.4	351.4	-22.4
10.20	5.92	2.14	0.28	8.35	.26	.27	966	876.4	351.7	-22.2
10.40	7.29	2.14	0.28	9.72	.20	.21	991	876.5	352.0	-22.0
10.60	8.84	2.14	0.28	11.26	.13	.15	1015	876.5	352.3	-21.9
10.80	7.69	2.14	0.28	10.11	.18	.19	996	876.5	352.6	-21.7
11.00	8.05	2.14	0.28	10.48	.17	.18	1003	876.6	352.8	-21.5
11.20	8.59	2.13	0.28	11.00	.14	.16	1012	876.6	353.1	-21.2
11.40	8.29	2.12	0.28	10.69	.16	.17	1007	876.6	353.4	-21.0
11.60	7.65	2.11	0.28	10.04	.18	.20	996	876.7	353.7	-20.8
11.80	7.18	2.09	0.28	9.55	.20	.21	989	876.7	353.9	-20.5
12.00	6.55	2.08	0.28	8.91	.24	.25	976	876.7	354.2	-20.2
12.20	6.26	2.06	0.28	8.59	.25	.26	968	876.7	354.4	-20.0
12.40	6.47	2.05	0.28	8.80	.24	.25	973	876.8	354.6	-19.7
12.60	6.34	2.04	0.28	8.66	.25	.26	970	876.8	354.9	-19.4
12.80	6.05	2.03	0.28	8.36	.26	.27	964	876.8	355.1	-19.1
37613.00	6.10	2.02	0.28	8.39	-17.26	-17.27	965	876.8	355.3	-18.7
13.50	6.00	1.97	0.28	8.26	.27	.28	963	876.9	355.8	-17.9
14.00	5.92	1.93	0.28	8.13	.27	.28	963	876.9	356.3	-17.0
14.50	5.94	1.87	0.27	8.08	.28	.28	962	876.9	356.7	-16.0
15.00	6.16	1.80	0.26	8.22	.27	.28	962	876.9	357.0	-15.0
15.50	6.53	1.70	0.26	8.50	.26	.27	967	876.9	357.3	-13.9
37615.60	6.61	1.67	0.26	8.55	-17.26	-17.27	968	876.9	357.3	-13.7
15.80	6.50	1.63	0.25	8.38	.27	.28	964	876.9	357.4	-13.2
16.00	6.55	1.61	0.25	8.41	.27	.28	965	876.9	357.5	-12.8
16.20	6.95	1.55	0.24	8.74	.25	.26	972	876.9	357.6	-12.3
16.40	6.83	1.52	0.24	8.59	.26	.27	969	876.9	357.7	-11.8
16.60	6.72	1.49	0.24	8.45	.26	.27	969	876.9	357.7	-11.4
16.80	6.40	1.45	0.24	8.09	.28	.29	962	876.9	357.8	-10.9

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37617.00	6.07	1.39	0.23	7.69	-17.30	-17.31	952	876.9	357.8	-10.4
17.20	6.06	1.36	0.22	7.64	.31	.32	947	876.9	357.9	-9.9
17.40	5.86	1.31	0.22	7.39	.33	.34	937	876.9	357.9	-9.4
17.60	5.32	1.26	0.22	6.80	.36	.37	919	876.9	357.9	-8.9
17.80	5.44	1.21	0.21	6.86	.36	.37	923	876.9	357.9	-8.3
18.00	5.55	1.18	0.20	6.93	.35	.36	926	876.8	357.9	-7.8
37618.50	4.99	1.05	0.19	6.23	-17.39	-17.40	906	876.8	357.9	-6.5
19.00	4.87	0.92	0.18	5.97	.41	.42	898	876.7	357.8	-5.1
19.50	4.96	0.79	0.16	5.92	.41	.42	896	876.7	357.7	-3.7
20.00	5.17	0.65	0.14	5.96	.42	.42	892	876.6	357.5	-2.3
20.50	5.41	0.51	0.13	6.06	.41	.42	890	876.6	357.3	-0.8
37620.80	5.24	0.43	0.12	5.79	-17.43	-17.44	877	876.5	357.2	0.1
21.00	5.22	0.36	0.11	5.69	.44	.46	870	876.5	357.1	0.7
21.20	7.06	0.30	0.10	7.46	.33	.34	931	876.4	357.0	1.3
21.40	8.75	0.23	0.09	9.06	.24	.26	970	876.4	356.9	1.9
21.60	9.43	0.17	0.08	9.68	.22	.23	983	876.4	356.8	2.5
21.80	8.43	0.11	0.08	8.61	.27	.28	959	876.4	356.7	3.1
22.00	9.63	0.03	0.07	9.73	.21	.23	982	876.3	356.5	3.7
22.20	8.65	-0.02	0.06	8.69	.26	.27	960	876.3	356.4	4.3
22.40	7.67	-0.10	0.05	7.63	.32	.33	933	876.2	356.3	4.9
22.60	6.03	-0.15	0.04	5.92	.43	.44	876	876.2	356.1	5.5
22.80	6.08	-0.21	0.03	5.90	.42	.43	880	876.2	356.0	6.2
37623.00	6.21	-0.29	0.02	5.94	-17.42	-17.43	883	876.1	355.9	6.8
23.50	6.43	-0.43	0.00	6.00	.42	.43	881	876.0	355.5	8.3
24.00	6.65	-0.56	-0.02	6.07	.41	.42	878	876.0	355.1	9.9
24.50	6.47	-0.73	-0.04	5.70	.44	.45	865	875.9	354.6	11.5
25.00	6.77	-0.88	-0.06	5.83	.42	.43	872	875.8	354.2	13.1
25.50	6.49	-1.05	-0.08	5.36	.46	.47	850	875.7	353.7	14.7
26.00	6.45	-1.20	-0.10	5.15	.47	.48	842	875.6	353.3	16.3
26.50	6.18	-1.37	-0.13	4.67	.51	.52	815	875.5	352.8	17.9
27.00	6.56	-1.50	-0.15	4.91	.49	.50	825	875.4	352.3	19.5
27.50	7.08	-1.62	-0.17	5.29	.46	.47	841	875.3	351.9	21.1
28.00	7.24	-1.74	-0.20	5.30	.46	.47	839	875.2	351.4	22.7
28.50	7.41	-1.84	-0.22	5.34	.46	.47	836	875.1	350.9	24.3
29.00	7.60	-1.95	-0.24	5.41	.45	.46	838	875.0	350.4	25.9
29.50	8.16	-2.07	-0.26	5.83	.41	.43	855	874.9	350.0	27.5
30.00	8.09	-2.14	-0.28	5.67	.43	.44	843	874.8	349.5	29.0
30.50	8.37	-2.20	-0.29	5.88	.41	.42	852	874.8	349.1	30.6
31.00	8.32	-2.22	-0.30	5.80	.41	.42	848	874.7	348.7	32.2
31.50	8.50	-2.20	-0.31	5.99	.39	.41	855	874.6	348.3	33.7
32.00	8.84	-2.15	-0.31	6.37	.37	.38	866	874.6	347.9	35.2
32.50	9.04	-2.11	-0.31	6.62	.35	.36	873	874.5	347.5	36.7
33.00	9.03	-2.03	-0.30	6.70	.34	.35	876	874.5	347.2	38.2
33.50	8.92	-1.91	-0.30	6.71	.34	.35	875	874.5	346.9	39.7
37633.60	9.02	-1.88	-0.30	6.84	-17.33	-17.32	880	874.4	346.8	40.0
33.80	8.20	-1.80	-0.29	6.11	.38	.37	851	874.4	346.7	40.5
34.00	6.54	-1.77	-0.29	4.48	.51	.50	769	874.4	346.6	41.1
34.20	10.79	-1.72	-0.28	8.80	.22	.21	937	874.4	346.5	41.7
34.40	17.58	-1.59	-0.28	15.71	-16.97	-16.96	1060	874.4	346.4	42.2
34.60	17.80	-1.50	-0.28	16.02	.97	.96	1056	874.4	346.3	42.8
34.80	15.83	-1.39	-0.27	14.17	-17.03	-17.02	1028	874.4	346.2	43.3
35.00	16.90	-1.29	-0.26	15.36	.00	-16.98	1044	874.4	346.1	43.9
35.20	16.50	-1.18	-0.26	15.06	.00	.99	1040	874.4	346.0	44.4
35.40	15.82	-1.07	-0.26	14.48	.02	-17.01	1032	874.4	346.0	45.0
35.60	15.48	-0.94	-0.26	14.28	.02	.01	1029	874.4	345.9	45.5
35.80	16.17	-0.85	-0.25	15.07	.00	-16.99	1039	874.4	345.9	46.0

Table 3 (cont.)

1961 81 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37636.00	17.04	0.72	-0.24	17.51	-16.94	-16.92	1069	874.4	345.8	46.6
36.20	16.91	-0.60	-0.24	16.07	.98	.96	1052	874.4	345.8	47.1
36.40	14.93	-0.54	-0.23	14.17	-17.03	-17.02	1025	874.4	345.7	47.6
36.60	11.46	-0.45	-0.23	10.78	.15	.13	965	874.4	345.7	48.1
36.80	10.69	-0.45	-0.22	10.02	.17	.16	949	874.4	345.7	48.6
37637.00	9.99	-0.45	-0.22	9.32	-17.20	-17.19	932	874.5	345.7	49.1
37.50	8.84	-0.44	-0.20	8.20	.25	.24	903	874.5	345.7	50.3
38.00	8.19	-0.43	-0.18	7.59	.28	.27	885	874.6	345.7	51.5
38.50	7.53	-0.42	-0.17	6.94	.31	.30	862	874.6	345.8	52.6
39.00	9.32	-0.40	-0.16	8.76	.21	.20	918	874.7	346.0	53.7
39.50	10.57	-0.36	-0.14	10.06	.15	.14	951	874.8	346.2	54.7
40.00	9.10	-0.34	-0.12	8.63	.21	.20	914	874.9	346.4	55.6
40.50	8.69	-0.32	-0.10	8.27	.23	.22	903	875.0	346.7	56.5
41.00	8.34	-0.31	-0.08	7.95	.24	.23	897	875.1	347.1	57.4
41.50	8.03	-0.27	-0.06	7.70	.25	.24	891	875.2	347.5	58.2
42.00	7.66	-0.24	-0.04	7.38	.27	.26	880	875.4	347.9	58.9
42.50	7.31	-0.20	-0.02	7.08	.28	.27	869	875.5	348.4	59.5
43.00	7.03	-0.18	0.00	6.84	.30	.29	859	875.7	348.9	60.1
43.50	7.08	-0.14	0.03	6.97	.29	.28	864	875.9	349.5	60.6
44.00	8.40	-0.11	0.05	8.34	.21	.20	909	876.1	350.1	61.0
44.50	8.54	-0.09	0.08	8.53	.21	.19	913	876.3	350.7	61.4
45.00	8.45	-0.04	0.10	8.51	.21	.19	913	876.5	351.4	61.6
45.50	6.51	-0.01	0.12	6.62	.31	.30	852	876.7	352.1	61.8
46.00	6.95	0.00	0.15	7.10	.28	.26	875	877.0	352.7	61.9
46.50	5.58	0.02	0.17	5.77	.37	.35	822	877.2	353.4	62.0
47.00	5.84	0.09	0.19	6.11	.35	.33	837	877.5	354.1	61.9
47.50	5.95	0.10	0.22	6.27	.33	.32	846	877.8	354.8	61.8
48.00	6.16	0.12	0.24	6.52	.32	.30	859	878.1	355.4	61.6
48.50	6.23	0.14	0.26	6.63	.31	.29	864	878.4	356.0	61.3
49.00	6.67	0.19	0.28	7.14	.28	.26	886	878.7	356.6	60.9
49.50	6.10	0.21	0.30	6.61	.31	.29	869	879.0	357.2	60.4
50.00	5.74	0.24	0.32	6.29	.33	.32	859	879.3	357.7	59.9
50.50	5.51	0.25	0.34	6.09	.35	.33	854	879.7	358.2	59.3
51.00	5.33	0.30	0.36	5.99	.36	.34	853	880.0	358.6	58.7
51.50	5.17	0.32	0.38	5.87	.37	.35	852	880.4	359.0	58.0
52.00	4.96	0.34	0.39	5.70	.38	.36	848	880.8	359.4	57.2
52.50	4.92	0.38	0.41	5.70	.38	.36	852	881.2	359.6	56.3
53.00	4.73	0.60	0.43	5.76	.38	.36	858	881.6	359.9	55.4
53.50	4.36	1.05	0.44	5.85	.38	.35	865	881.9	0.1	54.5
54.00	3.88	1.68	0.46	6.02	.37	.34	875	882.4	0.2	53.5
54.50	3.10	2.57	0.48	6.15	.36	.33	885	882.8	0.3	52.4
55.00	2.55	3.02	0.49	6.07	.37	.34	885	883.2	0.3	51.3
55.50	2.46	3.46	0.50	6.42	.35	.32	901	883.6	0.3	50.1
56.00	2.88	3.83	0.52	7.22	.30	.27	932	884.0	0.2	49.0
56.50	2.90	4.11	0.53	7.54	.29	.26	943	884.5	0.1	47.7
57.00	2.97	4.36	0.54	7.87	.28	.25	954	884.9	359.9	46.5
57.50	3.00	4.56	0.55	8.11	.27	.24	964	885.4	359.7	45.2
58.00	2.81	4.72	0.56	8.09	.27	.23	969	885.8	359.5	43.9
58.50	2.59	4.76	0.57	7.92	.28	.24	972	886.3	359.2	42.5
59.00	2.19	4.80	0.57	7.57	.30	.26	966	886.7	358.9	41.1
59.50	2.85	4.81	0.58	8.24	.27	.23	986	887.2	358.6	39.7
60.00	3.00	4.82	0.58	8.40	.27	.22	991	887.7	358.2	38.3
60.50	3.39	4.81	0.58	8.79	.25	.21	1002	888.1	357.8	36.9
61.00	3.98	4.77	0.58	9.33	.23	.18	1018	888.6	357.4	35.4
37661.40	4.88	4.73	0.58	10.19	-17.19	-17.15	1036	888.9	357.1	34.2
61.60	4.99	4.71	0.58	10.27	.20	.15	1037	889.1	356.9	33.6
61.80	4.92	4.68	0.57	10.18	.21	.16	1034	889.3	356.7	33.0
62.00	4.17	4.64	0.57	9.39	.25	.19	1020	889.5	356.5	32.5

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37662.50	3.47	4.58	0.56	8.61	-17.28	-17.23	1008	890.0	356.1	30.9
63.00	2.84	4.48	0.55	7.88	.32	.27	994	890.4	355.6	29.4
63.50	2.55	4.34	0.54	7.43	.35	.29	983	890.9	355.1	27.9
64.00	2.42	4.20	0.53	7.15	.37	.31	979	891.3	354.6	26.4
64.50	2.04	4.07	0.51	6.62	.40	.34	970	891.8	354.1	24.8
65.00	1.79	3.94	0.49	6.22	.42	.37	960	892.2	353.6	23.3
65.50	1.50	3.79	0.47	5.76	.46	.40	948	892.6	353.1	21.8
66.00	1.39	3.66	0.45	5.50	.48	.42	943	893.1	352.6	20.2
66.50	1.15	3.52	0.43	5.10	.52	.46	927	893.5	352.1	18.7
67.00	1.10	3.40	0.41	4.91	.53	.47	925	893.9	351.6	17.1
67.50	1.02	3.25	0.39	4.66	.55	.49	922	894.3	351.2	15.6
68.00	0.79	3.11	0.37	4.27	.59	.53	906	894.7	350.7	14.1
68.50	0.55	3.00	0.35	3.90	.63	.57	889	895.0	350.3	12.6
69.00	0.36	2.87	0.33	3.56	.67	.61	872	895.4	349.8	11.0
69.50	0.27	2.74	0.31	3.32	.70	.64	858	895.8	349.4	9.5
70.00	0.27	2.60	0.29	3.16	.72	.66	847	896.1	349.1	8.1
70.50	0.28	2.49	0.28	3.04	.74	.68	838	896.4	348.7	6.6
71.00	0.48	2.37	0.26	3.11	.73	.67	849	896.8	348.4	5.1
71.50	0.52	2.26	0.24	3.02	.74	.68	845	897.1	348.1	3.7
72.00	1.00	2.14	0.23	3.37	.70	.64	875	897.3	347.8	2.3
72.50	0.99	2.04	0.22	3.24	.72	.66	866	897.6	347.6	0.9
73.00	0.85	1.93	0.21	2.99	.75	.69	848	897.9	347.4	-0.5
73.50	1.37	1.83	0.20	3.41	.70	.63	885	898.1	347.3	-1.8
37673.80	1.68	1.78	0.19	3.65	-17.67	-17.61	900	898.2	347.2	-2.6
74.00	2.04	1.73	0.19	3.96	.64	.57	917	898.3	347.2	-3.2
74.20	1.23	1.69	0.18	3.11	.75	.68	851	898.4	347.2	-3.7
74.40	2.62	1.66	0.18	4.46	.60	.52	934	898.5	347.2	-4.2
74.60	3.34	1.62	0.18	5.14	.54	.46	960	898.6	347.1	-4.7
74.80	5.25	1.59	0.18	7.01	.41	.32	1023	898.7	347.1	-5.2
75.00	3.80	1.54	0.18	5.52	.51	.43	978	898.7	347.2	-5.7
75.20	3.87	1.51	0.18	5.56	.50	.42	984	898.8	347.2	-6.2
75.40	2.61	1.48	0.18	4.27	.61	.54	931	898.9	347.2	-6.6
37675.50	2.64	1.47	0.18	4.29	-17.61	-17.54	934	898.9	347.2	-6.9
76.00	2.13	1.38	0.17	3.68	.67	.60	907	899.1	347.3	-8.0
76.50	1.75	1.30	0.16	3.21	.73	.66	881	899.2	347.5	-9.2
77.00	1.67	1.24	0.16	3.08	.74	.68	872	899.3	347.7	-10.2
77.50	1.83	1.19	0.15	3.17	.73	.66	880	899.4	348.0	-11.2
78.00	2.06	1.15	0.14	3.35	.70	.64	899	899.5	348.3	-12.2
78.50	2.10	1.09	0.14	3.33	.71	.64	897	899.6	348.7	-13.1
79.00	2.49	1.07	0.13	3.69	.67	.60	914	899.6	349.1	-14.0
79.50	2.75	1.05	0.13	3.93	.64	.57	928	899.6	349.6	-14.7
80.00	2.68	1.03	0.12	3.83	.65	.58	924	899.7	350.1	-15.5
80.50	2.68	1.02	0.11	3.81	.66	.58	920	899.7	350.7	-16.1
81.00	2.70	1.00	0.10	3.79	.66	.58	920	899.6	351.3	-16.7
81.50	2.69	0.99	0.10	3.78	.65	.58	926	899.6	351.9	-17.2
82.00	2.55	0.96	0.10	3.61	.67	.60	920	899.5	352.6	-17.6
82.50	2.39	0.96	0.09	3.44	.69	.62	909	899.5	353.3	-18.0
83.00	2.63	0.95	0.09	3.67	.66	.59	920	899.4	354.1	-18.2
83.50	3.79	0.94	0.08	4.82	.55	.47	972	899.3	354.8	-18.4
84.00	3.58	0.93	0.08	4.59	.57	.49	960	899.1	355.5	-18.6
84.50	3.40	0.91	0.08	4.39	.59	.51	954	899.0	356.3	-18.6
85.00	3.45	0.89	0.09	4.43	.58	.50	956	898.8	357.0	-18.5
85.50	3.56	0.87	0.09	4.52	.58	.49	957	898.7	357.7	-18.4
86.00	3.76	0.86	0.09	4.70	.56	.47	965	898.5	358.4	-18.2
86.50	3.93	0.84	0.09	4.86	.54	.46	973	898.3	359.1	-17.9
87.00	3.86	0.83	0.09	4.78	.54	.47	969	898.1	359.7	-17.6
87.50	3.98	0.80	0.09	4.87	.54	.46	972	897.9	0.3	-17.2
88.00	3.95	0.78	0.09	4.82	.54	.46	968	897.6	0.9	-16.7

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37688.50	3.84	0.75	0.08	4.67	-17.55	-17.48	961	897.4	1.4	-16.1
89.00	4.09	0.72	0.08	4.88	.54	.46	967	897.1	1.8	-15.5
89.50	4.36	0.69	0.08	5.15	.51	.43	975	896.8	2.2	-14.8
90.00	4.74	0.65	0.08	5.48	.49	.41	985	896.5	2.6	-14.1
90.50	5.31	0.61	0.08	6.00	.45	.37	1000	896.2	2.9	-13.3
91.00	5.43	0.56	0.07	6.06	.45	.36	1001	895.9	3.1	-12.4
91.50	5.62	0.51	0.07	6.20	.44	.35	1004	895.6	3.3	-11.5
92.00	5.75	0.44	0.06	6.25	.43	.35	1003	895.3	3.5	-10.6
92.50	5.95	0.39	0.06	6.39	.42	.34	1006	894.9	3.5	-9.6
93.00	6.09	0.32	0.06	6.47	.41	.34	1007	894.6	3.6	-8.6
93.50	5.85	0.25	0.05	6.14	.44	.36	995	894.2	3.6	-7.5
94.00	5.74	0.16	0.05	5.95	.45	.37	987	893.9	3.5	-6.4
94.50	5.80	0.09	0.04	5.93	.45	.38	984	893.5	3.4	-5.3
95.00	5.78	0.00	0.04	5.82	.46	.39	978	893.1	3.3	-4.1
95.50	5.69	-0.11	0.03	5.61	.47	.40	971	892.7	3.1	-2.9
96.00	5.55	-0.20	0.02	5.36	.48	.42	962	892.3	2.9	-1.7
96.50	5.60	-0.31	0.02	5.31	.49	.43	957	891.9	2.7	-0.5
97.00	5.29	-0.42	0.01	4.88	.52	.47	935	891.5	2.4	0.8
97.50	5.48	-0.54	0.00	4.95	.52	.46	934	891.1	2.1	2.0
98.00	5.62	-0.64	0.00	4.98	.52	.46	933	890.7	1.7	3.3
98.50	5.80	-0.75	-0.01	5.04	.51	.45	933	890.2	1.4	4.6
37699.00	5.98	-0.87	-0.02	5.10	-17.50	-17.45	933	889.8	1.0	5.9
99.20	6.01	-0.92	-0.02	5.07	.50	.45	930	889.6	0.9	6.4
99.40	6.54	-0.96	-0.03	5.55	.47	.41	948	889.5	0.7	7.0
99.60	6.91	-1.02	-0.04	5.85	.45	.39	956	889.3	0.5	7.5
99.80	8.11	-1.07	-0.04	7.00	.37	.31	991	889.1	0.4	8.0
37700.00	9.32	-1.10	-0.04	8.17	.30	.24	1020	888.9	0.2	8.6
00.20	11.37	-1.16	-0.04	10.17	.21	.15	1060	888.8	0.0	9.1
00.40	9.71	-1.21	-0.04	8.46	.28	.23	1026	888.6	359.9	9.6
00.60	7.89	-1.26	-0.05	6.58	.39	.34	978	888.4	359.7	10.2
00.80	6.40	-1.31	-0.06	5.04	.50	.45	920	888.2	359.5	10.7
01.00	6.43	-1.37	-0.06	5.00	.51	.46	916	888.1	359.3	11.2
37701.50	6.49	-1.49	-0.07	4.93	-17.51	-17.46	912	887.6	358.9	12.6
02.00	6.61	-1.61	-0.08	4.92	.51	.46	906	887.2	358.5	13.9
02.50	6.77	-1.74	-0.10	4.93	.51	.47	899	886.7	358.0	15.3
03.00	6.81	-1.83	-0.11	4.87	.51	.47	896	886.3	357.6	16.6
03.50	6.70	-1.93	-0.12	4.65	.52	.48	887	885.9	357.1	18.0
04.00	6.62	-2.04	-0.14	4.44	.54	.50	873	885.4	356.7	19.3
04.50	6.55	-2.12	-0.15	4.27	.55	.52	860	885.0	356.3	20.7
05.00	6.59	-2.20	-0.16	4.23	.56	.52	856	884.5	355.8	22.0
05.50	6.53	-2.26	-0.17	4.09	.57	.53	846	884.1	355.4	23.3
06.00	6.66	-2.35	-0.18	4.13	.56	.53	846	883.7	355.0	24.6
06.50	7.40	-2.40	-0.20	4.80	.50	.47	879	883.2	354.7	25.9
07.00	7.79	-2.45	-0.21	5.13	.47	.44	885	882.8	354.3	27.2
07.50	8.35	-2.48	-0.22	5.66	.43	.40	906	882.4	354.0	28.4
08.00	8.41	-2.51	-0.23	5.67	.42	.40	906	882.0	353.7	29.7
08.50	8.27	-2.53	-0.24	5.50	.44	.41	896	881.5	353.4	30.9
09.00	8.19	-2.54	-0.25	5.40	.44	.41	889	881.1	353.2	32.1
09.50	8.16	-2.52	-0.25	5.39	.44	.41	888	880.7	353.0	33.3
10.00	8.18	-2.49	-0.25	5.44	.43	.41	888	880.3	352.8	34.4
37710.20	8.19	-2.47	-0.25	5.47	-17.43	-17.41	885	880.1	352.7	34.9
10.40	8.23	-2.45	-0.25	5.53	.42	.40	890	880.0	352.7	35.3
10.60	8.27	-2.44	-0.25	5.58	.42	.39	894	879.8	352.6	35.8
10.80	8.48	-2.42	-0.24	5.82	.40	.37	904	879.7	352.6	36.2
11.00	8.69	-2.39	-0.24	6.06	.38	.36	910	879.5	352.6	36.6
11.20	10.07	-2.37	-0.24	7.46	.29	.27	959	879.3	352.5	37.1
11.40	10.27	-2.34	-0.23	7.71	.27	.25	967	879.2	352.5	37.5

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37711.60	11.14	-2.30	-0.23	8.61	-17.23	-17.21	987	879.0	352.5	37.9
11.80	12.01	-2.26	-0.22	9.53	.19	.17	1005	876.9	352.5	38.3
12.00	11.36	-2.24	-0.22	8.90	.22	.20	989	878.7	352.5	38.7
12.20	10.03	-2.17	-0.22	7.65	.28	.26	955	878.6	352.5	39.1
12.40	9.71	-2.14	-0.21	7.36	.30	.28	948	878.4	352.5	39.5
12.60	8.88	-2.10	-0.21	6.57	.34	.32	922	878.3	352.6	39.9
12.80	8.72	-2.04	-0.20	6.49	.34	.32	923	878.1	352.6	40.3
37713.00	8.33	-1.99	-0.20	6.14	-17.37	-17.35	911	878.0	352.6	40.6
13.50	8.00	-1.82	-0.19	5.99	.37	.35	906	877.6	352.8	41.5
14.00	7.75	-1.64	-0.18	5.93	.37	.36	901	877.3	353.0	42.4
14.50	7.89	-1.55	-0.16	6.17	.36	.34	910	876.9	353.2	43.2
15.00	7.87	-1.29	-0.15	6.43	.33	.32	920	876.5	353.5	43.9
15.50	7.99	-1.07	-0.14	6.78	.31	.30	931	876.2	353.9	44.6
16.00	7.96	-0.81	-0.13	7.02	.30	.28	936	875.9	354.3	45.2
16.50	8.44	-0.51	-0.12	7.80	.25	.24	958	875.5	354.8	45.8
17.00	8.66	-0.30	-0.11	8.25	.23	.22	967	875.2	355.3	46.3
17.50	8.72	-0.15	-0.10	8.47	.22	.21	971	874.9	355.8	46.8
18.00	8.68	-0.09	-0.09	8.51	.22	.20	972	874.6	356.4	47.1
18.50	8.81	-0.04	-0.08	8.69	.21	.19	976	874.3	357.1	47.4
19.00	8.72	-0.03	-0.07	8.61	.21	.20	973	874.0	357.7	47.6
19.50	8.96	-0.01	-0.06	8.89	.20	.19	980	873.7	358.5	47.8
20.00	9.10	0.00	-0.05	9.05	.19	.18	983	873.5	359.2	47.9
20.50	9.19	0.00	-0.04	9.15	.18	.17	986	873.2	359.9	47.9
21.00	9.29	0.01	-0.04	9.27	.18	.17	988	872.9	0.7	47.8
37721.40	9.38	0.02	-0.03	9.37	-17.17	-17.16	989	872.7	1.3	47.6
21.60	9.88	0.03	-0.02	9.89	.15	.14	1001	872.6	1.6	47.6
21.80	10.20	0.04	-0.02	10.22	.14	.13	1007	872.5	1.9	47.5
22.00	10.51	0.05	-0.02	10.54	.12	.12	1013	872.4	2.2	47.4
22.20	11.99	0.08	-0.01	12.06	.06	.06	1039	872.3	2.5	47.2
22.40	11.62	0.09	-0.01	11.70	.08	.07	1033	872.2	2.8	47.1
22.60	11.42	0.06	0.00	11.48	.08	.08	1030	872.1	3.1	47.0
22.80	10.86	0.05	0.00	10.92	.11	.10	1020	872.0	3.4	46.8
37723.00	10.25	0.04	0.00	10.29	-17.13	-17.12	1008	871.9	3.7	46.6
23.50	9.12	0.02	0.01	9.16	.18	.17	985	871.7	4.5	46.1
24.00	8.83	0.01	0.02	8.86	.19	.19	978	871.5	5.2	45.6
24.50	8.17	0.02	0.02	8.21	.23	.22	961	871.3	5.8	44.9
25.00	8.00	0.20	0.03	8.23	.23	.22	961	871.1	6.4	44.2
25.50	7.93	0.33	0.04	8.30	.22	.22	963	870.9	7.0	43.4
26.00	7.83	0.48	0.04	8.36	.22	.22	965	870.7	7.6	42.6
26.50	7.61	0.62	0.05	8.29	.22	.22	963	870.5	8.1	41.7
27.00	7.38	0.75	0.05	8.18	.23	.23	959	870.3	8.5	40.7
27.50	7.24	0.86	0.06	8.16	.23	.23	959	870.2	8.9	39.7
28.00	6.92	0.96	0.06	7.95	.24	.24	956	870.0	9.3	38.6
28.50	6.60	1.07	0.06	7.74	.25	.25	947	869.8	9.6	37.4
29.00	6.46	1.16	0.06	7.68	.26	.26	943	869.7	9.8	36.2
29.50	6.26	1.23	0.06	7.55	.27	.27	938	869.5	10.0	35.0
30.00	5.92	1.28	0.06	7.26	.28	.28	930	869.4	10.1	33.7
30.50	5.43	1.29	0.05	6.77	.31	.31	916	869.3	10.2	32.4
31.00	5.06	1.30	0.03	6.39	.33	.33	907	869.1	10.2	31.0
31.50	4.24	1.29	0.02	5.55	.39	.39	877	869.0	10.2	29.6
32.00	3.77	1.29	0.00	5.06	.43	.43	856	868.9	10.2	28.1
32.50	3.42	1.26	-0.02	4.67	.46	.46	836	868.8	10.1	26.7
33.00	3.80	1.22	-0.04	4.98	.44	.44	849	868.7	10.0	25.2
33.50	4.40	1.17	-0.06	5.51	.40	.40	869	868.6	9.8	23.6
34.00	5.42	1.09	-0.08	6.43	.33	.34	903	868.5	9.6	22.1

Table 3 (cont.)

1961 81 (Explorer 9)

MJD	$-10^7 \dot{p}$	$10^7 \dot{p}_s$	$10^7 \dot{p}_t$	$-10^7 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37734.20	5.15	1.07	-0.09	6.13	-17.35	-17.36	892	868.5	9.5	21.5
34.40	5.19	1.05	-0.10	6.14	.36	.36	891	868.4	9.4	20.8
34.60	5.23	1.00	-0.10	6.13	.35	.36	892	868.4	9.3	20.2
34.80	5.28	0.96	-0.11	6.13	.35	.36	893	868.3	9.2	19.6
35.00	4.99	0.92	-0.12	5.79	.38	.38	880	868.3	9.1	18.9
35.20	5.22	0.87	-0.13	5.96	.36	.37	889	868.3	9.0	18.3
35.40	5.11	0.84	-0.14	5.80	.38	.38	882	868.2	8.9	17.6
35.60	5.34	0.77	-0.14	5.97	.37	.37	886	868.2	8.8	17.0
35.80	5.52	0.74	-0.15	6.11	.36	.36	889	868.2	8.7	16.3
36.00	6.01	0.66	-0.16	6.52	.33	.34	904	868.2	8.5	15.7
36.20	5.66	0.62	-0.16	6.12	.36	.36	889	868.1	8.4	15.0
36.40	5.12	0.55	-0.17	5.50	.40	.41	865	868.1	8.3	14.3
36.60	5.24	0.50	-0.18	5.57	.39	.40	872	868.1	8.1	13.7
36.80	5.02	0.43	-0.18	5.27	.42	.42	859	868.0	8.0	13.0
37.00	4.96	0.35	-0.19	5.13	.42	.43	855	868.0	7.9	12.4
37.20	5.23	0.30	0.20	5.73	.37	.38	884	868.0	7.7	11.7
37.40	5.32	0.23	0.20	5.75	.37	.38	884	868.0	7.6	11.0
37737.50	5.42	0.20	0.20	5.82	-17.37	-17.37	886	867.9	7.5	10.7
38.00	5.82	0.03	0.22	6.07	.35	.36	893	867.9	7.1	9.0
38.50	6.03	-0.11	0.24	6.16	.35	.35	895	867.8	6.7	7.3
39.00	6.56	-0.25	0.25	6.57	.32	.32	911	867.7	6.3	5.6
39.50	6.81	-0.42	0.27	6.66	.31	.32	915	867.7	5.9	3.9
40.00	7.08	-0.55	0.28	6.81	.30	.31	920	867.6	5.5	2.2
40.50	7.28	-0.70	0.29	6.87	.30	.30	921	867.6	5.1	0.5
41.00	8.04	-0.85	0.30	7.49	.26	.26	941	867.5	4.7	-1.2
41.50	8.71	-0.99	0.32	8.04	.23	.23	954	867.5	4.3	-2.9
42.00	9.55	-1.16	0.33	8.72	.19	.20	968	867.4	3.9	-4.6
42.50	10.62	-1.30	0.34	9.67	.15	.16	988	867.4	3.6	-6.3
37742.60	10.91	-1.33	0.34	9.92	-17.14	-17.14	993	867.3	3.5	-6.6
42.80	11.60	-1.39	0.34	10.55	.11	.12	1005	867.3	3.3	-7.3
43.00	11.78	-1.46	0.34	10.66	.11	.11	1007	867.3	3.2	-8.0
43.20	11.62	-1.50	0.34	10.46	.11	.12	1003	867.3	3.1	-8.6
43.40	12.13	-1.58	0.35	10.91	.09	.10	1012	867.3	2.9	-9.3
43.60	12.30	-1.63	0.35	11.02	.09	.10	1014	867.2	2.8	-10.0
43.80	12.80	-1.72	0.35	11.44	.07	.08	1021	867.2	2.6	-10.6
44.00	13.13	-1.75	0.36	11.74	.06	.07	1027	867.2	2.5	-11.3
44.20	13.11	-1.82	0.36	11.65	.06	.07	1025	867.2	2.4	-12.0
44.40	13.26	-1.90	0.36	11.72	.06	.07	1025	867.1	2.3	-12.6
44.60	12.89	-1.95	0.36	11.30	.07	.08	1019	867.1	2.1	-13.3
44.80	13.19	-2.03	0.36	11.53	.06	.07	1022	867.1	2.0	-13.9
45.00	13.49	-2.07	0.36	11.78	.05	.06	1027	867.1	1.9	-14.6
45.20	13.94	-2.14	0.36	12.16	.04	.05	1032	867.1	1.8	-15.2
45.40	13.22	-2.20	0.36	11.38	.07	.08	1019	867.0	1.7	-15.9
37745.50	13.23	-2.23	0.36	11.36	-17.07	-17.08	1019	867.0	1.6	-16.2
46.00	13.11	-2.36	0.36	11.12	.08	.09	1015	867.0	1.4	-17.8
46.50	13.17	-2.48	0.36	11.05	.08	.09	1013	866.9	1.2	-19.4
47.00	13.43	-2.59	0.36	11.20	.07	.08	1015	866.8	1.0	-20.9
47.50	13.78	-2.70	0.36	11.44	.06	.07	1019	866.8	0.9	-22.5
48.00	14.16	-2.81	0.36	11.71	.05	.06	1022	866.7	0.8	-24.0
48.50	14.46	-2.93	0.36	11.89	.04	.05	1025	866.6	0.7	-25.5
49.00	13.26	-3.00	0.35	10.61	.09	.10	1003	866.6	0.7	-26.9
49.50	12.99	-3.08	0.34	10.25	.10	.12	995	866.5	0.7	-28.3
50.00	12.13	-3.12	0.34	9.36	.14	.15	977	866.4	0.8	-29.7
50.50	12.94	-3.13	0.33	10.14	.11	.12	992	866.3	1.0	-31.0
51.00	12.08	-3.12	0.32	9.28	.14	.15	974	866.3	1.1	-32.3
51.50	12.27	-3.11	0.31	9.47	.13	.14	978	866.2	1.4	-33.5
52.00	12.95	-3.08	0.30	10.17	.10	.11	990	866.1	1.7	-34.7

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37752.50	13.01	-3.02	0.29	10.28	-17.10	-17.11	991	866.0	2.0	-35.9
53.00	12.04	-2.96	0.28	9.36	.14	.15	973	865.9	2.4	-37.0
53.50	10.57	-2.89	0.26	7.93	.21	.22	938	865.8	2.8	-38.0
54.00	10.10	-2.80	0.25	7.55	.23	.24	926	865.7	3.3	-38.9
54.50	10.07	-2.69	0.24	7.61	.22	.23	926	865.6	3.9	-39.8
55.00	9.84	-2.57	0.23	7.50	.23	.24	921	865.5	4.5	-40.7
55.50	9.97	-2.43	0.22	7.75	.21	.23	925	865.4	5.1	-41.4
56.00	9.62	-2.27	0.21	7.56	.22	.24	919	865.3	5.8	-42.1
56.50	9.30	-2.12	0.20	7.38	.23	.24	916	865.1	6.5	-42.7
57.00	8.90	-1.93	0.20	7.17	.25	.26	904	865.0	7.3	-43.3
57.50	8.42	-1.76	0.20	6.86	.27	.28	890	864.9	8.1	-43.7
58.00	7.77	-1.59	0.20	6.38	.30	.31	873	864.7	8.9	-44.1
58.50	7.80	-1.38	-0.20	6.22	.31	.32	865	864.6	9.7	-44.4
59.00	7.62	-1.17	-0.20	6.25	.30	.32	865	864.5	10.5	-44.6
59.50	7.26	-0.96	-0.20	6.10	.31	.33	861	864.3	11.3	-44.8
37759.80	7.17	-0.87	-0.20	6.10	-17.31	-17.32	865	864.2	11.8	-44.8
60.00	7.26	-0.76	-0.20	6.28	.30	.31	873	864.2	12.1	-44.8
60.20	7.03	-0.75	-0.20	6.08	.31	.33	863	864.1	12.4	-44.8
60.40	6.81	-0.68	-0.20	5.93	.33	.34	849	864.0	12.7	-44.8
60.60	7.10	-0.62	-0.21	6.27	.31	.32	857	864.0	13.0	-44.8
60.80	7.40	-0.57	-0.21	6.62	.28	.30	873	863.9	13.3	-44.7
61.00	7.37	-0.53	-0.21	6.64	.28	.30	872	863.8	13.6	-44.7
61.20	6.03	-0.48	-0.21	7.34	.24	.26	894	863.8	13.9	-44.6
61.40	6.86	-0.44	-0.21	8.21	.19	.21	920	863.7	14.2	-44.5
61.60	9.69	-0.42	-0.21	9.07	.15	.16	944	863.6	14.5	-44.5
61.80	6.86	-0.40	-0.21	8.25	.19	.21	921	863.6	14.8	-44.3
62.00	7.69	-0.35	-0.21	7.13	.25	.27	884	863.5	15.1	-44.2
62.20	7.37	-0.33	-0.20	6.84	.27	.29	874	863.4	15.4	-44.1
62.40	7.22	-0.32	-0.20	6.70	.28	.29	871	863.4	15.6	-44.0
62.60	7.25	-0.32	-0.20	6.73	.27	.29	876	863.3	15.9	-43.8
62.80	7.12	-0.31	-0.20	6.61	.28	.30	868	863.2	16.1	-43.7
63.00	6.99	-0.31	-0.20	6.48	.29	.31	860	863.2	16.4	-43.5
63.20	6.53	-0.31	-0.20	6.02	.32	.34	842	863.1	16.6	-43.3
63.40	6.08	-0.31	-0.20	5.57	.35	.37	826	863.0	16.8	-43.1
63.60	5.97	-0.32	-0.20	5.45	.36	.38	824	863.0	17.1	-42.9
63.80	6.37	-0.32	-0.19	5.86	.33	.35	842	862.9	17.3	-42.7
64.00	6.44	-0.32	-0.19	5.92	.33	.34	845	862.8	17.5	-42.5
64.20	6.34	-0.33	-0.19	5.82	.33	.35	842	862.7	17.7	-42.2
64.40	6.42	-0.34	-0.19	5.88	.33	.35	842	862.7	17.9	-42.0
64.60	6.83	-0.33	-0.18	6.32	.30	.32	858	862.6	18.1	-41.7
64.80	8.10	-0.32	-0.18	7.59	.22	.24	901	862.5	18.2	-41.5
65.00	9.19	-0.31	-0.18	8.70	.16	.19	933	862.5	18.4	-41.2
65.20	8.45	-0.30	-0.18	7.97	.20	.22	912	862.4	18.5	-40.9
65.40	7.54	-0.29	-0.18	7.07	.25	.28	884	862.3	18.7	-40.6
65.60	7.98	-0.28	-0.18	7.52	.23	.25	901	862.2	18.8	-40.3
65.80	7.24	-0.26	-0.17	6.82	.27	.29	877	862.2	19.0	-40.0
66.00	7.35	-0.24	-0.17	6.95	.26	.28	864	862.1	19.1	-39.7
37766.50	7.52	-0.20	-0.16	7.15	-17.25	-17.27	894	861.9	19.3	-38.8
67.00	7.38	-0.16	-0.16	7.06	.25	.27	892	861.7	19.5	-38.0
67.50	7.85	-0.12	-0.15	7.58	.22	.24	910	861.5	19.7	-37.0
68.00	8.24	-0.09	-0.14	8.02	.19	.22	925	861.3	19.8	-36.1
68.50	8.73	-0.02	-0.14	8.57	.17	.19	940	861.1	19.9	-35.1
69.00	9.37	0.02	-0.14	9.25	.13	.16	957	860.9	19.9	-34.0
37769.60	10.10	0.09	-0.13	10.06	-17.10	-17.13	974	860.7	19.8	-32.7
69.80	10.94	0.10	-0.13	10.91	.07	.09	990	860.6	19.8	-32.3
70.00	11.44	0.11	-0.13	11.42	.05	.08	1000	860.5	19.7	-31.8
70.20	12.96	0.11	-0.12	12.94	-16.99	.02	1024	860.5	19.7	-31.4

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37770.40	13.63	0.11	-0.12	13.62	-16.97	-17.00	1034	860.4	19.6	-30.9
70.60	13.63	0.12	-0.12	13.63	.97	.00	1034	860.3	19.6	-30.4
70.80	13.80	0.13	-0.11	13.61	.96	-16.99	1038	860.2	19.5	-30.0
71.00	13.63	0.13	-0.11	13.65	.97	-17.00	1035	860.2	19.5	-29.5
71.20	13.62	0.13	-0.10	13.65	.97	.00	1035	860.1	19.4	-29.0
71.40	13.62	0.13	-0.10	13.65	.97	.00	1036	860.0	19.3	-28.6
71.60	13.78	0.14	-0.10	13.82	.97	.00	1038	859.9	19.2	-28.1
71.80	13.94	0.14	-0.09	13.99	.96	-16.99	1041	859.9	19.1	-27.6
72.00	13.93	0.14	-0.09	13.98	.96	.99	1041	859.8	19.0	-27.1
72.20	13.59	0.13	-0.08	13.63	.97	-17.00	1036	859.7	18.9	-26.6
72.40	13.57	0.13	-0.08	13.62	.97	.01	1036	859.7	18.8	-26.1
72.60	13.72	0.13	-0.08	13.77	.97	.00	1039	859.6	18.7	-25.6
72.80	13.36	0.12	-0.07	13.41	.98	.02	1035	859.5	18.6	-25.1
37773.00	13.41	0.11	-0.06	13.46	-16.98	-17.02	1035	859.4	18.5	-24.6
73.50	13.07	0.09	-0.05	13.10	.99	.03	1030	859.3	18.2	-23.3
74.00	12.77	0.02	-0.04	12.75	-17.01	.04	1026	859.1	17.8	-22.1
74.50	12.43	-0.02	-0.03	12.38	.02	.05	1022	858.9	17.5	-20.8
75.00	12.93	-0.11	-0.02	12.50	.01	.04	1029	858.7	17.1	-19.5
75.50	13.84	-0.20	-0.01	13.62	-16.98	.02	1041	858.6	16.7	-18.1
37775.60	14.08	-0.21	-0.01	13.86	-16.97	-17.01	1044	858.6	16.6	-17.9
75.80	14.46	-0.25	0.00	14.22	.96	.00	1049	858.5	16.5	-17.3
76.00	14.50	-0.29	0.00	14.21	.96	.00	1051	858.4	16.3	-16.8
76.20	16.20	-0.33	0.00	15.87	.91	-16.95	1072	858.4	16.2	-16.3
76.40	20.25	-0.36	0.01	19.89	.81	.86	1111	858.3	16.0	-15.7
76.60	19.41	-0.42	0.02	19.01	.83	.88	1104	858.2	15.8	-15.2
76.80	16.71	-0.44	0.02	16.30	.90	.94	1077	858.2	15.7	-14.7
77.00	15.69	-0.49	0.02	15.22	.93	.97	1066	858.1	15.5	-14.1
77.20	15.66	-0.54	0.02	15.15	.94	.94	1065	858.1	15.3	-13.6
77.40	14.93	-0.57	0.03	14.39	.96	.97	1056	858.0	15.2	-13.1
77.60	14.21	-0.62	0.04	13.62	.98	.99	1047	858.0	15.0	-12.5
77.80	11.81	-0.65	0.04	11.19	-17.07	-17.08	1012	857.9	14.8	-12.0
37778.00	11.51	-0.70	0.05	10.86	-17.08	-17.09	1006	857.8	14.7	-11.5
78.50	10.91	-0.80	0.06	10.16	.11	.12	994	857.7	14.3	-10.1
79.00	10.88	-0.91	0.06	10.03	.12	.13	993	857.6	13.8	-8.8
79.50	10.67	-1.01	0.07	9.73	.13	.14	989	857.4	13.4	-7.5
80.00	10.54	-1.11	0.08	9.51	.15	.15	986	857.3	13.0	-6.1
80.50	10.65	-1.23	0.08	9.50	.15	.16	987	857.2	12.7	-4.8
81.00	10.38	-1.34	0.08	9.12	.17	.18	981	857.1	12.3	-3.5
81.50	10.14	-1.48	0.09	8.75	.18	.19	974	857.0	11.9	-2.2
82.00	9.59	-1.58	0.09	8.11	.22	.23	962	856.9	11.6	-0.9
82.50	9.10	-1.72	0.09	7.47	.25	.27	948	856.8	11.3	0.4
83.00	8.70	-1.82	0.09	6.97	.29	.30	936	856.7	11.0	1.6
83.50	8.44	-1.93	0.09	6.60	.31	.32	927	856.6	10.7	2.9
84.00	8.23	-2.06	0.09	6.26	.33	.34	918	856.5	10.5	4.1
84.50	7.93	-2.17	0.08	5.85	.36	.37	906	856.4	10.3	5.3
85.00	7.85	-2.28	0.08	5.65	.38	.39	900	856.3	10.1	6.4
85.50	7.99	-2.39	0.07	5.66	.38	.39	902	856.2	10.0	7.6
86.00	8.06	-2.50	0.07	5.64	.38	.39	904	856.2	9.9	8.7
86.50	8.25	-2.60	0.06	5.71	.38	.39	908	856.1	9.9	9.8
87.00	8.68	-2.71	0.06	6.03	.35	.36	922	856.0	9.9	10.8
87.50	8.14	-2.82	0.05	5.37	.40	.42	900	855.9	9.9	11.9
88.00	7.84	-2.92	0.04	4.97	.44	.45	886	855.9	10.0	12.8
88.50	7.52	-3.01	0.03	4.53	.47	.49	869	855.8	10.1	13.8
89.00	7.29	-3.09	0.02	4.22	.51	.52	856	855.8	10.3	14.7
89.50	7.11	-3.12	0.00	3.99	.53	.54	844	855.7	10.6	15.5
90.00	7.56	-3.19	-0.01	4.36	.49	.51	865	855.6	10.9	16.3
90.50	8.33	-3.24	-0.02	5.07	.43	.44	898	855.6	11.2	17.0

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37791.00	9.66	-3.30	-0.04	6.32	-17.33	-17.35	944	855.5	11.6	17.7
91.50	9.15	-3.32	-0.06	5.77	.37	.39	928	855.5	12.1	18.3
92.00	8.70	-3.38	-0.08	5.24	.42	.43	911	855.4	12.6	18.9
92.50	8.40	-3.42	-0.10	4.88	.45	.46	898	855.4	13.1	19.4
93.00	8.18	-3.43	-0.12	4.63	.47	.48	889	855.4	13.7	19.8
93.50	7.80	-3.46	-0.14	4.20	.51	.53	870	855.3	14.3	20.2
94.00	7.59	-3.52	-0.16	3.92	.54	.56	856	855.3	15.0	20.5
94.50	8.07	-3.54	-0.18	4.36	.50	.51	880	855.2	15.7	20.7
95.00	8.36	-3.54	-0.20	4.62	.47	.49	895	855.2	16.4	20.8
95.50	8.57	-3.54	-0.22	4.81	.45	.47	904	855.2	17.2	20.9
96.00	9.07	-3.54	-0.24	5.29	.41	.43	924	855.2	17.9	20.8
96.50	9.10	-3.54	-0.26	5.30	.41	.43	927	855.1	18.7	20.7
97.00	9.12	-3.54	-0.28	5.30	.41	.43	928	855.1	19.4	20.6
97.50	9.78	-3.54	-0.31	5.93	.36	.38	950	855.1	20.1	20.3
98.00	10.28	-3.54	-0.33	6.41	.33	.34	965	855.0	20.9	20.0
98.50	10.92	-3.54	-0.35	7.03	.29	.30	982	855.0	21.6	19.6
99.00	11.09	-3.54	-0.36	7.19	.28	.30	986	855.0	22.3	19.1
99.50	10.75	-3.54	-0.38	6.83	.30	.32	977	855.0	22.9	18.5
37800.00	10.31	-3.54	-0.41	6.36	.34	.35	964	855.0	23.5	17.9
00.50	10.21	-3.62	-0.44	6.14	.35	.37	958	854.9	24.1	17.2
01.00	10.20	-3.63	-0.46	6.11	.36	.37	957	854.9	24.6	16.4
01.50	10.24	-3.64	-0.48	6.12	.36	.37	959	854.9	25.1	15.6
02.00	10.41	-3.64	-0.50	6.26	.35	.36	964	854.9	25.5	14.7
02.50	10.52	-3.64	-0.52	6.36	.34	.36	967	854.9	25.9	13.7
03.00	10.79	-3.66	-0.54	6.60	.33	.34	974	854.9	26.2	12.7
03.50	10.96	-3.67	-0.57	6.72	.32	.34	975	854.9	26.4	11.7
04.00	11.25	-3.71	-0.59	6.96	.30	.32	981	854.9	26.7	10.5
04.50	11.74	-3.76	-0.62	7.36	.28	.30	990	854.9	26.8	9.4
05.00	11.54	-3.83	-0.64	7.07	.30	.32	984	854.8	26.9	8.2
05.50	11.30	-3.88	-0.66	6.76	.32	.34	976	854.8	27.0	7.0
06.00	11.18	-3.96	-0.68	6.55	.33	.35	970	854.8	27.0	5.7
06.50	11.17	-4.01	-0.70	6.46	.34	.36	967	854.8	26.9	4.4
07.00	11.10	-4.07	-0.72	6.31	.35	.37	963	854.8	26.8	3.0
07.50	10.91	-4.16	-0.74	6.01	.37	.39	954	854.8	26.7	1.6
08.00	10.87	-4.22	-0.76	5.88	.38	.40	949	854.8	26.5	0.2
08.50	10.78	-4.31	-0.78	5.69	.40	.41	943	854.8	26.3	-1.2
09.00	10.53	-4.40	-0.80	5.33	.43	.44	929	854.8	26.1	-2.6
09.50	10.20	-4.50	-0.81	4.88	.46	.48	911	854.8	25.8	-4.1
10.00	9.89	-4.49	-0.82	4.58	.49	.51	897	854.8	25.5	-5.6
10.50	10.37	-4.70	-0.84	4.84	.47	.49	907	854.8	25.2	-7.1
11.00	11.04	-4.80	-0.84	5.40	.42	.44	928	854.8	24.8	-8.6
37811.20	11.61	-4.85	-0.85	5.91	-17.38	-17.40	946	854.8	24.7	-9.2
11.40	12.64	-4.89	-0.85	6.90	.31	.33	975	854.8	24.5	-9.9
11.60	12.66	-4.93	-0.86	6.87	.32	.33	974	854.8	24.4	-10.5
11.80	12.86	-4.98	-0.86	7.01	.31	.32	977	854.8	24.2	-11.1
12.00	12.88	-5.04	-0.86	6.98	.31	.33	976	854.8	24.1	-11.7
12.20	12.91	-5.07	-0.86	6.98	.31	.33	974	854.8	23.9	-12.3
12.40	13.11	-5.13	-0.86	7.11	.30	.32	976	854.9	23.7	-13.0
12.60	12.80	-5.17	-0.86	6.78	.32	.34	967	854.9	23.6	-13.6
12.80	12.50	-5.23	-0.86	6.41	.35	.36	956	854.9	23.4	-14.2
37813.00	12.26	-5.27	-0.87	6.12	-17.37	-17.38	947	854.9	23.2	-14.8
13.50	12.23	-5.40	-0.87	5.96	.38	.40	939	854.9	22.8	-16.4
14.00	11.76	-5.53	-0.88	5.35	.42	.44	916	854.9	22.3	-18.0
14.50	11.68	-5.66	-0.88	5.14	.44	.46	906	854.9	21.9	-19.6
15.00	12.07	-5.77	-0.88	5.42	.42	.43	916	854.9	21.4	-21.1
37815.20	13.10	-5.81	-0.88	6.41	-17.34	-17.36	950	854.9	21.2	-21.8
15.40	13.32	-5.87	-0.88	6.56	.33	.35	953	854.9	21.0	-22.4

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37815.60	13.36	-5.92	-0.88	6.56	-17.33	-17.35	953	854.9	20.9	-23.0
15.80	14.24	-5.98	-0.88	7.37	.28	.30	977	854.9	20.7	-23.7
16.00	14.10	-6.00	-0.88	7.21	.29	.31	971	854.9	20.5	-24.3
16.20	13.95	-6.06	-0.88	7.01	.31	.32	964	854.9	20.3	-24.9
16.40	13.28	-6.11	-0.88	6.29	.35	.37	941	854.9	20.1	-25.6
16.60	12.95	-6.15	-0.88	5.92	.38	.39	928	854.9	19.9	-26.2
16.80	12.61	-6.22	-0.88	5.51	.41	.42	912	854.9	19.8	-26.8
37817.00	12.70	-6.24	-0.88	5.58	-17.40	-17.42	914	854.9	19.6	-27.4
17.50	12.55	-6.38	-0.87	5.30	.42	.43	901	854.9	19.1	-29.0
18.00	12.32	-6.49	-0.86	4.97	.45	.46	885	855.0	18.7	-30.5
18.50	12.45	-6.59	-0.86	4.99	.44	.46	884	855.0	18.3	-32.1
19.00	12.53	-6.68	-0.86	5.00	.44	.45	880	855.0	17.9	-33.6
19.50	12.82	-6.76	-0.85	5.21	.42	.44	886	855.0	17.5	-35.1
20.00	12.99	-6.86	-0.84	5.29	.42	.43	887	855.0	17.2	-36.6
20.50	13.01	-6.95	-0.84	5.22	.42	.43	883	855.0	16.8	-38.1
21.00	13.07	-6.99	-0.83	5.25	.41	.43	882	855.0	16.5	-39.6
21.50	13.09	-7.05	-0.82	5.21	.42	.43	878	855.1	16.2	-41.0
22.00	12.88	-7.09	-0.82	4.98	.43	.44	867	855.1	16.0	-42.4
22.50	12.67	-7.11	-0.81	4.75	.45	.46	852	855.1	15.8	-43.8
23.00	12.18	-7.11	-0.80	4.27	.49	.50	825	855.1	15.6	-45.2
23.50	12.17	-7.08	-0.79	4.30	.48	.50	828	855.1	15.5	-46.5
24.00	12.60	-7.04	-0.78	4.78	.44	.45	851	855.1	15.4	-47.8
24.50	13.38	-7.00	-0.77	5.61	.37	.38	885	855.1	15.4	-49.0
25.00	13.76	-6.94	-0.76	6.06	.34	.35	900	855.1	15.4	-50.2
25.50	13.81	-6.81	-0.75	6.26	.32	.34	907	855.2	15.4	-51.4
26.00	13.31	-6.65	-0.74	5.92	.34	.35	896	855.2	15.5	-52.6
26.50	12.70	-6.43	-0.73	5.54	.36	.37	881	855.2	15.7	-53.6
27.00	12.31	-6.13	-0.72	5.46	.37	.38	876	855.2	15.9	-54.7
27.50	12.01	-5.79	-0.70	5.53	.36	.37	877	855.2	16.2	-55.7
28.00	11.65	-5.44	-0.69	5.53	.36	.37	877	855.2	16.5	-56.6
28.50	11.20	-5.01	-0.68	5.51	.36	.37	876	855.2	16.9	-57.4
29.00	10.71	-4.50	-0.66	5.55	.35	.36	878	855.2	17.3	-58.2
29.50	10.36	-2.89	-0.64	6.83	.26	.27	929	855.3	17.8	-59.0
30.00	9.74	-1.39	-0.63	7.71	.21	.22	956	855.3	18.3	-59.6
30.50	9.20	-0.16	-0.62	8.41	.18	.19	975	855.3	18.9	-60.2
31.00	7.96	-0.16	-0.60	7.20	.24	.25	939	855.3	19.5	-60.8
31.50	6.90	-0.16	-0.58	6.16	.31	.32	902	855.3	20.1	-61.2
32.00	6.76	-0.17	-0.56	6.03	.31	.32	899	855.3	20.8	-61.6
32.50	6.76	-0.17	-0.54	6.05	.31	.32	901	855.3	21.5	-61.9
33.00	6.81	-0.17	-0.52	6.12	.30	.31	904	855.3	22.2	-62.1
33.50	6.76	-0.16	-0.50	6.10	.31	.32	903	855.3	22.9	-62.2
34.00	6.79	-0.11	-0.48	6.20	.30	.31	908	855.3	23.7	-62.2
34.50	6.59	-0.06	-0.46	6.06	.31	.32	902	855.3	24.4	-62.2
35.00	6.73	-0.02	-0.44	6.26	.30	.31	910	855.3	25.2	-62.1
35.50	6.70	0.00	-0.42	6.28	.30	.31	912	855.3	25.9	-61.9
36.00	6.64	0.01	-0.40	6.25	.30	.31	912	855.3	26.6	-61.6
36.50	6.76	0.04	-0.38	6.42	.29	.30	918	855.4	27.2	-61.2
37836.60	6.76	0.05	-0.37	6.44	-17.29	-17.32	919	855.4	27.4	-61.1
36.80	6.70	0.08	-0.36	6.41	.30	.33	915	855.4	27.6	-61.0
37.00	6.81	0.09	-0.36	6.53	.29	.33	918	855.4	27.9	-60.8
37.20	6.75	0.10	-0.35	6.50	.30	.33	918	855.4	28.1	-60.6
37.40	6.70	0.11	-0.34	6.47	.30	.33	919	855.4	28.3	-60.4
37.60	7.50	0.11	-0.34	7.26	.25	.28	949	855.4	28.6	-60.2
37.80	7.12	0.12	-0.32	6.92	.26	.30	941	855.4	28.8	-59.9
37838.00	7.08	0.13	-0.32	6.89	-17.27	-17.30	939	855.4	29.0	-59.7
38.50	6.72	0.16	-0.30	6.58	.29	.33	927	855.4	29.5	-59.0
39.00	6.48	0.20	-0.28	6.40	.31	.34	922	855.4	30.0	-58.3

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37839.50	6.18	0.21	-0.26	6.14	-17.32	-17.36	916	855.4	30.4	-57.5
40.00	5.95	0.25	-0.24	5.95	.34	.37	911	855.4	30.8	-56.6
40.50	5.55	0.30	-0.22	5.63	.37	.40	900	855.4	31.1	-55.7
41.00	5.45	0.32	-0.20	5.58	.37	.40	902	855.4	31.3	-54.7
41.50	5.55	0.35	-0.18	5.72	.36	.39	910	855.4	31.5	-53.7
42.00	5.59	0.40	-0.16	5.83	.36	.40	913	855.4	31.7	-52.6
42.50	6.60	0.43	-0.14	6.89	.30	.33	951	855.4	31.8	-51.5
43.00	6.73	0.45	-0.12	7.06	.29	.33	958	855.4	31.8	-50.3
43.50	6.38	0.48	-0.10	6.76	.31	.35	951	855.4	31.8	-49.1
44.00	5.75	0.51	-0.08	6.18	.35	.39	933	855.4	31.8	-47.9
44.50	5.66	0.53	-0.07	6.11	.36	.40	933	855.4	31.7	-46.6
45.00	5.31	0.53	-0.06	5.77	.39	.43	923	855.4	31.5	-45.3
45.50	5.02	0.54	-0.04	5.52	.41	.45	916	855.4	31.4	-43.9
46.00	4.86	0.54	-0.03	5.37	.42	.46	913	855.4	31.1	-42.6
46.50	4.52	0.54	-0.02	5.04	.45	.49	902	855.4	30.9	-41.2
47.00	4.42	0.45	-0.01	4.86	.47	.51	897	855.4	30.6	-39.7
47.50	4.65	0.32	0.00	4.97	.46	.50	907	855.4	30.3	-38.3
48.00	4.90	0.18	0.00	5.08	.46	.49	914	855.4	30.0	-36.8
48.50	5.00	0.00	0.01	5.01	.47	.50	912	855.4	29.6	-35.3
49.00	5.36	-0.27	0.01	5.11	.46	.50	920	855.4	29.2	-33.8
49.50	5.69	-0.28	0.01	5.42	.44	.48	934	855.4	28.8	-32.3
37849.80	5.89	-0.29	0.02	5.62	-17.43	-17.47	943	855.4	28.5	-31.4
50.00	6.09	-0.30	0.02	5.81	.42	.46	949	855.4	28.4	-30.8
50.20	6.81	-0.31	0.02	6.51	.37	.42	972	855.4	28.2	-30.2
50.40	6.51	-0.32	0.02	6.21	.40	.44	964	855.4	28.0	-29.6
50.60	6.39	-0.32	0.02	6.09	.40	.45	961	855.4	27.9	-29.0
50.80	6.60	-0.32	0.02	6.30	.39	.43	970	855.4	27.7	-28.3
37851.00	6.48	-0.32	0.02	6.18	-17.40	-17.44	967	855.4	27.5	-27.7
51.50	5.98	-0.41	0.01	5.58	.44	.48	949	855.4	27.0	-26.2
52.00	6.11	-0.49	0.01	5.62	.44	.48	954	855.4	26.6	-24.6
52.50	6.21	-0.60	0.00	5.61	.44	.48	957	855.4	26.1	-23.1
53.00	6.37	-0.73	0.00	5.64	.44	.48	958	855.4	25.7	-21.5
53.50	6.65	-0.86	0.00	5.80	.44	.48	965	855.4	25.2	-19.9
54.00	6.59	-1.00	0.00	5.59	.45	.49	960	855.4	24.7	-18.4
54.50	6.71	-1.14	-0.01	5.56	.45	.49	963	855.4	24.3	-16.8
55.00	6.53	-1.30	-0.02	5.21	.48	.52	954	855.4	23.8	-15.3
55.50	6.55	-1.36	-0.02	5.17	.49	.53	954	855.4	23.4	-13.7
56.00	6.62	-1.63	-0.03	4.96	.51	.55	947	855.4	23.0	-12.2
56.50	6.81	-1.81	-0.03	4.97	.51	.55	948	855.4	22.6	-10.6
57.00	6.96	-1.96	-0.04	4.96	.52	.56	949	855.4	22.2	-9.1
57.50	7.10	-2.12	-0.04	4.94	.52	.56	950	855.3	21.9	-7.6
58.00	7.27	-2.25	-0.05	4.97	.52	.56	954	855.3	21.6	-6.1
58.50	7.43	-2.43	-0.06	4.93	.52	.56	954	855.3	21.3	-4.7
59.00	7.64	-2.59	-0.07	4.98	.52	.56	956	855.3	21.0	-3.2
59.50	8.13	-2.77	-0.08	5.28	.49	.54	968	855.2	20.8	-1.8
60.00	7.73	-2.82	-0.09	4.82	.53	.57	954	855.2	20.6	-0.4
60.50	7.85	-3.11	-0.10	4.64	.55	.59	950	855.1	20.4	1.0
61.00	7.96	-3.28	-0.11	4.57	.55	.59	949	855.1	20.3	2.4
61.50	7.91	-3.44	-0.12	4.35	.57	.62	941	855.1	20.2	3.7
62.00	7.94	-3.64	-0.13	4.17	.59	.63	939	855.0	20.2	5.0
62.50	7.80	-3.82	-0.14	3.85	.62	.66	925	854.9	20.2	6.2
63.00	8.01	-3.97	-0.15	3.89	.62	.66	927	854.9	20.3	7.4
63.50	8.29	-4.14	-0.16	4.00	.61	.65	932	854.8	20.4	8.6
64.00	8.54	-4.29	-0.18	4.08	.60	.64	935	854.7	20.6	9.7
64.50	8.87	-4.42	-0.19	4.26	.59	.63	942	854.7	20.8	10.8
65.00	9.22	-4.53	-0.20	4.48	.57	.61	950	854.6	21.1	11.8
65.50	9.51	-4.64	-0.22	4.64	.55	.60	956	854.5	21.4	12.8
66.00	9.74	-4.74	-0.24	4.76	.54	.59	962	854.4	21.8	13.7

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37866.50	9.45	-4.63	-0.26	4.36	-17.58	-17.62	947	854.3	22.2	14.6
67.00	9.40	-4.93	-0.26	4.19	.60	.64	940	854.2	22.7	15.4
67.50	9.24	-5.02	-0.30	3.93	.62	.67	929	854.1	23.2	16.1
68.00	9.24	-5.06	-0.32	3.86	.63	.67	929	853.9	23.8	16.8
68.50	8.94	-5.15	-0.34	3.45	.68	.72	905	853.8	24.4	17.4
69.00	9.30	-5.23	-0.36	3.71	.65	.69	919	853.7	25.1	17.9
37869.40	9.17	-5.25	-0.38	3.54	-17.66	-17.71	912	853.5	25.6	18.2
69.60	9.70	-5.27	-0.39	4.04	.60	.65	941	853.5	25.9	18.4
69.80	9.55	-5.31	-0.40	3.85	.63	.68	926	853.4	26.2	18.6
70.00	9.58	-5.34	-0.40	3.84	.63	.69	921	853.4	26.5	18.7
70.20	10.27	-5.36	-0.41	4.50	.57	.62	951	853.3	26.7	18.8
70.40	9.95	-5.37	-0.42	4.16	.60	.65	936	853.2	27.0	18.9
70.60	10.31	-5.38	-0.42	4.51	.56	.62	952	853.2	27.3	19.0
70.80	10.49	-5.39	-0.43	4.67	.54	.59	963	853.1	27.6	19.1
71.00	10.68	-5.45	-0.44	4.79	.53	.58	972	853.0	27.9	19.2
71.20	11.19	-5.46	-0.44	5.30	.49	.54	985	853.0	28.2	19.3
71.40	10.87	-5.47	-0.45	4.95	.53	.58	966	852.9	28.5	19.3
71.60	10.88	-5.48	-0.46	4.94	.53	.59	966	852.8	28.8	19.4
71.80	10.56	-5.48	-0.47	4.61	.56	.61	953	852.7	29.1	19.4
72.00	10.40	-5.49	-0.48	4.43	.57	.63	945	852.7	29.4	19.4
72.20	10.23	-5.50	-0.49	4.24	.59	.65	937	852.6	29.7	19.4
72.40	10.57	-5.51	-0.50	4.56	.56	.62	950	852.5	30.0	19.4
72.60	10.07	-5.52	-0.50	4.05	.61	.66	929	852.4	30.3	19.4
72.80	9.90	-5.53	-0.51	3.86	.63	.69	919	852.4	30.6	19.3
73.00	9.73	-5.54	-0.52	3.67	.66	.71	909	852.3	30.9	19.3
37873.50	9.23	-5.56	-0.54	3.13	-17.72	-17.78	874	852.1	31.6	19.1
74.00	9.08	-5.57	-0.56	2.95	.75	.80	860	851.8	32.3	18.8
74.50	9.00	-5.57	-0.58	2.84	.76	.81	852	851.6	32.9	18.5
75.00	8.91	-5.57	-0.60	2.74	.78	.83	844	851.4	33.6	18.1
75.50	8.41	-5.60	-0.62	2.19	.87	.92	784	851.1	34.1	17.7
76.00	8.70	-5.60	-0.64	2.47	.82	.87	821	850.9	34.7	17.1
76.50	9.14	-5.60	-0.65	2.89	.75	.80	858	850.6	35.1	16.5
77.00	9.26	-5.60	-0.67	3.00	.74	.80	855	850.4	35.6	15.9
77.50	9.82	-5.59	-0.69	3.55	.67	.74	889	850.1	35.9	15.1
78.00	10.45	-5.57	-0.71	4.17	.60	.66	921	849.8	36.3	14.4
78.50	10.57	-5.56	-0.72	4.28	.59	.64	928	849.5	36.5	13.5
79.00	9.73	-5.55	-0.74	3.44	.68	.73	883	849.2	36.8	12.7
79.50	9.45	-5.53	-0.76	3.15	.72	.78	860	848.9	36.9	11.7
80.00	9.41	-5.51	-0.78	3.12	.72	.78	856	848.6	37.1	10.8
80.50	9.35	-5.50	-0.80	3.06	.73	.79	850	848.3	37.1	9.8
81.00	9.38	-5.53	-0.82	3.03	.73	.79	846	848.0	37.1	8.7
81.50	9.46	-5.55	-0.84	3.06	.73	.79	845	847.6	37.1	7.6
82.00	9.55	-5.57	-0.86	3.12	.72	.78	847	847.3	37.0	6.5
82.50	9.59	-5.59	-0.88	3.12	.72	.78	841	846.9	36.9	5.4
83.00	9.80	-5.60	-0.90	3.30	.70	.76	850	846.6	36.8	4.2
83.50	9.94	-5.66	-0.92	3.36	.69	.75	854	846.2	36.6	3.0
84.00	10.06	-5.69	-0.94	3.43	.68	.75	855	845.8	36.4	1.8
84.50	10.44	-5.77	-0.96	3.71	.65	.72	870	845.5	36.1	0.5
85.00	10.41	-5.80	-0.98	3.63	.65	.73	863	845.1	35.9	-0.7
85.50	10.37	-5.87	-1.00	3.49	.67	.74	852	844.7	35.5	-2.0
86.00	10.27	-5.92	-1.02	3.34	.68	.75	840	844.3	35.2	-3.3
86.50	10.21	-6.00	-1.04	3.17	.70	.77	825	843.9	34.9	-4.6
87.00	10.12	-6.06	-1.06	3.01	.72	.79	813	843.4	34.5	-5.9
87.50	9.88	-6.12	-1.07	2.69	.76	.83	767	843.0	34.1	-7.3
88.00	9.62	-6.21	-1.09	2.33	.82	.89	746	842.6	33.7	-8.6
88.50	10.04	-6.28	-1.10	2.66	.76	.83	778	842.2	33.3	-10.0
89.00	10.30	-6.38	-1.12	2.80	.74	.81	788	841.7	32.9	-11.3
89.50	10.87	-6.43	-1.14	3.29	.66	.73	828	841.3	32.5	-12.7

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37890.00	11.33	-6.53	-1.16	3.64	-17.62	-17.70	847	840.8	32.1	-14.0
90.50	11.65	-6.62	-1.17	3.85	.60	.67	856	840.3	31.6	-15.4
91.00	12.77	-6.73	-1.18	4.86	.50	.58	904	839.9	31.2	-16.7
91.50	13.18	-6.81	-1.20	5.17	.47	.56	914	839.4	30.8	-18.1
37891.60	13.40	-6.63	-1.20	5.37	-17.45	-17.46	921	839.3	30.7	-18.3
91.80	13.66	-6.86	-1.20	5.59	.43	.44	928	839.1	30.6	-18.9
92.00	13.91	-6.91	-1.20	5.80	.42	.42	935	838.9	30.4	-19.4
92.20	14.01	-6.95	-1.21	5.85	.41	.42	936	838.7	30.2	-20.0
92.40	13.93	-6.98	-1.21	5.74	.42	.43	933	838.5	30.1	-20.5
92.60	14.02	-7.05	-1.21	5.76	.42	.42	933	838.3	29.9	-21.0
92.80	14.62	-7.09	-1.21	6.32	.37	.38	951	838.1	29.8	-21.6
93.00	14.71	-7.13	-1.22	6.36	.37	.38	950	837.9	29.6	-22.1
93.20	13.96	-7.18	-1.22	5.56	.43	.44	925	837.7	29.5	-22.6
93.40	14.39	-7.23	-1.22	5.94	.40	.41	936	837.5	29.3	-23.1
37893.50	14.36	-7.25	-1.22	5.89	-17.40	-17.41	934	837.4	29.2	-23.4
94.00	14.32	-7.35	-1.22	5.74	.41	.42	927	836.9	28.9	-24.7
94.50	14.21	-7.45	-1.22	5.54	.42	.44	917	836.4	28.6	-26.0
95.00	14.26	-7.55	-1.22	5.49	.42	.44	913	835.9	28.3	-27.3
95.50	13.80	-7.62	-1.22	4.96	.47	.48	889	835.4	28.0	-28.6
96.00	13.38	-7.72	-1.22	4.45	.51	.52	864	834.8	27.7	-29.8
96.50	13.08	-7.78	-1.22	4.07	.54	.55	843	834.3	27.5	-31.0
97.00	12.31	-7.85	-1.22	3.24	.63	.65	785	833.8	27.3	-32.2
97.50	13.36	-7.93	-1.22	4.21	.52	.53	849	833.2	27.2	-33.4
37897.80	13.18	-7.98	-1.21	4.00	-17.54	-17.55	836	832.9	27.1	-34.1
98.00	14.32	-8.01	-1.21	5.10	.43	.45	889	832.7	27.1	-34.5
98.20	14.29	-8.03	-1.20	5.06	.44	.46	882	832.4	27.0	-35.0
98.40	15.43	-8.05	-1.20	6.18	.36	.38	923	832.2	27.0	-35.4
98.60	14.56	-8.08	-1.20	5.28	.42	.45	889	832.0	27.0	-35.9
98.80	15.20	-8.12	-1.19	5.89	.37	.39	914	831.8	27.0	-36.3
99.00	15.17	-8.14	-1.18	5.85	.37	.40	911	831.5	27.0	-36.7
99.20	14.97	-8.15	-1.18	5.64	.39	.42	901	831.3	27.0	-37.2
99.40	15.11	-8.16	-1.18	5.77	.38	.40	906	831.1	27.0	-37.6
99.60	15.41	-8.17	-1.17	6.07	.35	.38	917	830.9	27.0	-38.0
99.80	15.05	-8.19	-1.16	5.70	.38	.41	903	830.6	27.0	-38.4
37900.00	14.85	-8.21	-1.15	5.49	.40	.42	894	830.4	27.1	-38.8
00.20	14.66	-8.23	-1.14	5.29	.41	.44	886	830.2	27.1	-39.2
00.40	14.80	-8.24	-1.14	5.42	.40	.43	890	829.9	27.1	-39.6
00.60	14.44	-8.24	-1.13	5.07	.43	.46	873	829.7	27.2	-39.9
00.80	14.41	-8.25	-1.12	5.04	.43	.46	870	829.5	27.3	-40.3
37901.00	14.29	-8.25	-1.10	4.94	-17.44	-17.47	866	829.2	27.3	-40.7
01.50	14.21	-8.25	-1.08	4.88	.44	.47	863	828.6	27.6	-41.5
02.00	14.03	-8.25	-1.04	4.74	.45	.48	856	828.0	27.9	-42.4
02.50	13.98	-8.23	-1.02	4.72	.45	.48	854	827.4	28.2	-43.1
03.00	13.42	-8.19	-1.00	4.23	.49	.52	828	826.8	28.6	-43.8
03.50	13.19	-8.15	-0.98	4.07	.50	.54	820	826.2	29.0	-44.5
04.00	12.69	-8.08	-0.95	3.66	.55	.58	792	825.6	29.5	-45.1
04.50	12.79	-8.03	-0.93	3.83	.53	.56	801	825.0	30.1	-45.6
05.00	12.98	-7.93	-0.91	4.13	.49	.53	820	824.4	30.7	-46.1
05.50	13.31	-7.83	-0.89	4.60	.45	.49	841	823.7	31.3	-46.5
06.00	13.58	-7.72	-0.88	4.98	.41	.46	855	823.1	32.0	-46.8
06.50	13.80	-7.61	-0.86	5.33	.38	.43	871	822.5	32.7	-47.0
07.00	13.89	-7.47	-0.86	5.56	.36	.41	878	821.8	33.5	-47.2
37907.20	14.36	-7.40	-0.85	6.11	-17.32	-17.37	899	821.6	33.8	-47.2
07.40	14.22	-7.32	-0.85	6.05	.33	.38	893	821.3	34.1	-47.2
07.60	14.42	-7.27	-0.85	6.30	.31	.37	901	821.0	34.4	-47.3

Table 3 (cont.)

1961 81 (Explorer 9)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37907.80	14.62	-7.16	-0.84	6.59	-17.29	-17.34	915	820.8	34.7	-47.3
08.00	14.48	-7.12	-0.84	6.52	.29	.34	916	820.5	35.0	-47.3
08.20	14.50	-7.05	-0.84	6.61	.28	.33	918	820.3	35.4	-47.2
08.40	14.53	-6.97	-0.84	6.72	.28	.33	918	820.0	35.7	-47.2
08.60	14.73	-6.88	-0.84	7.01	.26	.32	924	819.7	36.0	-47.2
08.80	14.59	-6.81	-0.83	6.95	.26	.32	920	819.5	36.3	-47.1
09.00	14.61	-6.74	-0.83	7.04	.26	.32	922	819.2	36.6	-47.0
09.20	14.80	-6.65	-0.82	7.34	.24	.30	931	819.0	37.0	-46.9
09.40	15.00	-6.55	-0.82	7.63	.22	.28	939	818.7	37.3	-46.8
09.60	14.51	-6.46	-0.82	7.23	.24	.31	927	818.4	37.6	-46.7
09.80	15.04	-6.39	-0.82	7.83	.21	.28	943	818.2	37.9	-46.6
10.00	14.72	-6.30	-0.82	7.60	.22	.29	937	817.9	38.3	-46.4
10.20	14.90	-6.21	-0.82	7.87	.20	.27	944	817.6	38.6	-46.3
10.40	15.42	-6.11	-0.82	8.49	.17	.24	958	817.4	38.9	-46.1
10.60	14.76	-6.00	-0.81	7.95	.20	.27	946	817.1	39.2	-45.9
10.80	15.44	-5.90	-0.81	8.73	.16	.23	963	816.8	39.5	-45.8
11.00	15.11	-5.77	-0.81	8.53	.17	.25	959	816.6	39.8	-45.5
11.20	15.61	-5.66	-0.80	9.15	.13	.22	973	816.3	40.1	-45.3
11.40	15.61	-5.56	-0.80	9.25	.13	.21	975	816.0	40.4	-45.1
11.60	15.11	-5.46	-0.80	8.85	.15	.23	966	815.8	40.7	-44.9
37912.00	13.96	-5.25	-0.80	7.91	-17.20	-17.28	943	815.2	41.2	-44.3
12.50	13.39	-5.03	-0.79	7.57	.22	.30	933	814.5	41.9	-43.6
13.00	13.38	-4.80	-0.78	7.80	.20	.29	938	813.9	42.5	-42.8
13.50	13.67	-4.58	-0.78	8.31	.17	.26	948	813.2	43.1	-42.0
14.00	13.78	-4.37	-0.77	8.64	.16	.25	954	812.5	43.6	-41.0
14.50	13.90	-4.18	-0.76	8.96	.14	.23	960	811.8	44.1	-40.0
15.00	13.51	-3.43	-0.76	9.32	.12	.22	965	811.2	44.5	-39.0
15.50	13.18	-3.82	-0.76	8.60	.16	.26	950	810.5	44.9	-37.9
16.00	13.18	-3.73	-0.76	8.69	.15	.25	950	809.8	45.2	-36.7
16.50	13.22	-3.66	-0.76	8.81	.15	.25	951	809.1	45.5	-35.5
17.00	13.22	-3.64	-0.76	8.81	.15	.25	949	808.5	45.7	-34.3
17.50	13.09	-3.68	-0.76	8.66	.16	.09	944	807.8	45.8	-32.9
18.00	12.85	-3.74	-0.76	8.35	.17	.11	936	807.1	45.9	-31.6
18.50	13.16	-3.81	-0.76	8.59	.16	.10	940	806.4	46.0	-30.2
37919.00	13.85	-3.89	-0.76	9.19	-17.13	-17.08	951	805.7	46.0	-28.8
19.20	14.41	-3.93	-0.76	9.71	.11	.05	959	805.5	46.0	-28.2
19.40	15.97	-3.97	-0.76	11.25	.04	-16.98	984	805.2	46.0	-27.6
19.60	18.70	-4.00	-0.76	13.95	-16.94	.88	1021	804.9	45.9	-27.0
19.80	19.09	-4.03	-0.76	14.30	.93	.87	1024	804.7	45.9	-26.4
20.00	16.79	-4.07	-0.76	11.96	-17.01	.95	995	804.4	45.9	-25.8
37920.50	16.16	-4.17	-0.76	11.23	-17.04	-16.99	982	803.7	45.8	-24.3
21.00	15.50	-4.29	-0.76	10.46	.07	-17.02	967	803.1	45.6	-22.8
21.50	15.46	-4.41	-0.75	10.30	.08	.03	962	802.4	45.4	-21.2
22.00	15.60	-4.52	-0.75	10.32	.08	.04	961	801.7	45.2	-19.6
22.50	15.65	-4.65	-0.74	10.26	.08	.04	959	801.1	44.9	-18.0
23.00	15.74	-4.80	-0.74	10.19	.08	.04	957	800.4	44.7	-16.4
23.50	15.77	-4.93	-0.72	10.12	.09	.05	953	799.8	44.4	-14.7
24.00	15.67	-5.05	-0.72	9.90	.10	.06	948	799.1	44.0	-13.1
24.50	15.59	-5.18	-0.71	9.70	.10	.07	942	798.4	43.7	-11.4
25.00	15.23	-5.33	-0.70	9.20	.13	.10	931	797.8	43.3	-9.7
25.50	14.83	-5.47	-0.69	8.68	.16	.13	919	797.2	42.9	-8.0
26.00	15.16	-5.60	-0.68	8.89	.14	.12	920	796.5	42.6	-6.3
37926.40	16.42	-5.70	-0.68	10.04	-17.09	-17.06	941	796.0	42.2	-5.0
26.60	17.12	-5.79	-0.67	10.67	.06	.03	953	795.7	42.1	-4.3
26.80	19.67	-5.82	-0.67	13.18	-16.97	-16.94	986	795.5	41.9	-3.6
27.00	18.20	-5.90	-0.67	11.63	-17.02	.99	967	795.2	41.8	-2.9

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37927.20	17.40	-5.97	-0.66	10.77	-17.05	-17.03	955	795.0	41.6	-2.2
37927.50	16.39	-6.06	-0.66	9.67	-17.10	-17.08	932	794.6	41.4	-1.2
28.00	15.83	-6.22	-0.66	8.96	.14	.12	915	794.0	41.0	0.5
28.50	16.00	-6.37	-0.65	8.98	.14	.12	914	793.4	40.6	2.2
29.00	16.49	-6.54	-0.65	9.30	.12	.11	919	792.7	40.2	3.9
29.50	17.87	-6.66	-0.64	10.57	.06	.05	939	792.1	39.8	5.6
30.00	17.43	-6.62	-0.64	9.98	.08	.08	928	791.5	39.4	7.3
30.50	17.04	-6.97	-0.64	9.43	.11	.11	915	790.9	39.0	9.0
31.00	16.84	-7.13	-0.64	9.07	.13	.13	906	790.3	38.7	10.6
31.50	16.64	-7.29	-0.64	8.71	.14	.15	898	789.7	38.3	12.3
32.00	16.87	-7.48	-0.64	8.74	.14	.14	897	789.1	38.0	13.9
32.50	17.39	-7.63	-0.65	9.11	.12	.13	902	788.5	37.7	15.6
33.00	18.52	-7.83	-0.66	10.03	.08	.09	917	787.9	37.5	17.2
33.50	19.71	-7.99	-0.66	11.07	.03	.04	933	787.4	37.3	18.8
34.00	19.30	-8.15	-0.67	10.48	.05	.07	922	786.8	37.0	20.3
34.50	19.21	-8.28	-0.68	10.25	.06	.08	916	786.2	36.9	21.9
35.00	18.80	-8.39	-0.68	9.73	.09	.10	905	785.7	36.7	23.4
35.50	18.81	-8.52	-0.70	9.59	.09	.11	900	785.1	36.6	24.9
36.00	19.77	-8.64	-0.70	10.43	.05	.07	913	784.6	36.6	26.4
36.50	20.57	-8.77	-0.72	11.08	.02	.05	922	784.0	36.6	27.8
37936.80	21.40	-8.81	-0.73	11.85	-16.99	-17.02	932	783.7	36.6	28.6
37.00	23.38	-8.88	-0.73	13.77	.93	-16.95	957	783.5	36.6	29.2
37.20	25.03	-8.90	-0.74	15.39	.87	.90	975	783.3	36.6	29.7
37.40	24.36	-8.96	-0.74	14.66	.89	.92	967	783.0	36.7	30.3
37.60	23.54	-9.00	-0.75	13.78	.92	.95	955	782.8	36.7	30.8
37.80	23.29	-9.04	-0.75	13.50	.93	.96	951	782.6	36.8	31.3
38.00	22.54	-9.10	-0.76	12.68	.96	.99	940	782.4	36.8	31.8
38.20	21.64	-9.11	-0.76	11.77	.99	-17.02	927	782.2	36.9	32.3
38.40	21.58	-9.18	-0.77	11.64	.99	.02	925	782.0	36.9	32.8
38.60	22.37	-9.22	-0.77	12.38	.96	-16.99	938	781.8	37.0	33.3
38.80	22.83	-9.25	-0.78	12.80	.94	.98	944	781.6	37.1	33.8
39.00	22.46	-9.29	-0.78	12.38	.95	.99	938	781.4	37.2	34.3
39.20	21.93	-9.32	-0.79	11.82	.98	-17.01	928	781.2	37.3	34.8
37939.50	22.08	-9.38	-0.80	11.90	-16.98	-17.01	926	780.9	37.5	35.5
40.00	20.71	-9.44	-0.81	10.46	-17.04	.07	899	780.4	37.8	36.6
40.50	20.10	-9.54	-0.82	9.74	.07	.10	884	779.9	38.2	37.7
41.00	19.67	-9.54	-0.84	9.29	.09	.13	873	779.4	38.7	38.7
41.50	19.31	-9.56	-0.85	8.90	.11	.15	862	778.9	39.1	39.6
42.00	19.18	-9.58	-0.86	8.74	.11	.15	856	778.4	39.7	40.5
42.50	19.49	-9.59	-0.87	9.02	.10	.14	861	777.9	40.3	41.3
43.00	19.80	-9.59	-0.88	9.32	.08	.13	864	777.5	40.9	42.0
43.50	20.21	-9.58	-0.90	9.73	.06	.11	871	777.0	41.6	42.7
44.00	19.91	-9.54	-0.91	9.46	.07	.12	864	776.5	42.3	43.3
44.50	20.39	-9.51	-0.92	9.97	.05	.10	873	776.1	43.0	43.8
37944.80	20.35	-9.46	-0.93	9.96	-17.05	-17.10	872	775.8	43.4	44.0
45.00	21.70	-9.40	-0.93	11.37	-16.99	.04	895	775.7	43.7	44.2
45.20	21.55	-9.34	-0.94	11.28	.99	.05	893	775.5	44.0	44.3
45.40	21.57	-9.32	-0.94	11.31	.99	.05	894	775.3	44.4	44.5
45.60	22.25	-9.25	-0.94	12.06	.96	.02	904	775.1	44.7	44.6
45.80	22.93	-9.22	-0.94	12.78	.94	-16.99	913	775.0	45.0	44.7
46.00	22.95	-9.17	-0.95	12.83	.94	.99	914	774.8	45.3	44.8
46.20	23.62	-9.11	-0.95	13.56	.91	.97	923	774.6	45.6	44.9
46.40	23.30	-9.06	-0.95	13.29	.92	.98	920	774.5	45.9	45.0
46.60	22.30	-9.00	-0.96	12.33	.95	-17.01	905	774.3	46.2	45.0
46.80	21.80	-8.95	-0.96	11.89	.97	.03	898	774.1	46.5	45.1

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37947.00	21.77	-8.90	-0.96	11.91	-16.97	-17.03	897	774.0	46.8	45.1
47.50	21.44	-8.66	-0.96	11.80	.97	.03	893	773.5	47.6	45.2
48.00	21.24	-9.00	-0.96	11.27	.99	.05	883	773.1	48.4	45.1
48.50	20.88	-8.25	-0.96	11.67	.97	.04	889	772.8	49.1	45.0
49.00	20.84	-8.00	-0.96	11.88	.97	.03	891	772.4	49.8	44.8
49.50	20.51	-7.70	-0.95	11.86	.97	.03	889	772.0	50.4	44.5
50.00	20.11	-7.39	-0.95	11.78	.97	.04	886	771.6	51.1	44.1
37950.20	20.02	-7.25	-0.95	11.82	-16.97	-17.03	887	771.5	51.3	44.0
50.40	19.98	-7.10	-0.94	11.94	.97	.03	888	771.3	51.5	43.8
50.60	18.94	-6.97	-0.94	11.03	-17.00	.07	872	771.2	51.7	43.6
50.80	20.06	-6.86	-0.94	12.26	-16.95	.02	891	771.0	52.0	43.4
51.00	20.69	-6.65	-0.93	13.11	.92	-16.99	903	770.9	52.2	43.2
51.20	21.47	-6.49	-0.92	14.07	.89	.97	915	770.7	52.4	43.0
51.40	23.43	-6.31	-0.92	16.19	.83	.90	940	770.6	52.5	42.8
51.60	22.20	-6.13	-0.92	15.15	.85	.93	930	770.4	52.7	42.6
51.80	22.48	-5.98	-0.92	15.57	.84	.92	933	770.3	52.9	42.3
52.00	21.58	-5.79	-0.91	14.88	.87	.94	925	770.2	53.1	42.1
52.20	21.00	-5.61	-0.90	14.50	.88	.96	919	770.0	53.2	41.8
52.40	20.60	-5.47	-0.90	14.23	.89	.96	915	769.9	53.4	41.5
52.60	20.85	-5.25	-0.90	14.70	.88	.95	920	769.7	53.5	41.2
52.80	18.43	-5.06	-0.89	12.48	.95	-17.02	890	769.6	53.6	40.9
53.00	18.51	-4.88	-0.88	12.75	.94	.01	893	769.5	53.8	40.6
53.20	18.58	-4.66	-0.88	13.02	.93	.00	897	769.3	53.9	40.3
53.40	18.48	-4.49	-0.88	13.11	.93	.00	898	769.2	54.0	40.0
53.60	19.21	-4.25	-0.87	14.10	.89	-16.97	911	769.1	54.1	39.7
53.80	18.60	-3.97	-0.86	13.77	.90	.98	908	768.9	54.2	39.4
54.00	18.81	-3.75	-0.86	14.20	.89	.97	911	768.8	54.2	39.0
54.20	18.68	-3.45	-0.85	14.36	.89	.97	913	768.7	54.3	38.7
54.40	18.88	-3.22	-0.84	14.83	.87	.95	917	768.5	54.4	38.3
54.60	18.91	-2.89	-0.84	15.17	.87	.94	920	768.4	54.4	38.0
54.80	18.75	-2.67	-0.84	15.25	.87	.94	921	768.3	54.5	37.6
55.00	17.93	-2.36	-0.83	14.74	.88	.95	916	768.2	54.5	37.2
55.20	17.76	-2.14	-0.82	14.79	.88	.96	915	768.0	54.5	36.8
55.40	17.58	-2.00	-0.82	14.75	.88	.96	916	767.9	54.5	36.4
55.60	17.72	-1.86	-0.81	15.04	.87	.95	918	767.8	54.6	36.0
55.80	17.19	-1.76	-0.81	14.62	.88	.96	912	767.7	54.6	35.6
56.00	17.31	-1.63	-0.80	14.89	.87	.96	915	767.5	54.6	35.2
56.20	17.43	-1.39	-0.80	15.24	.87	.95	919	767.4	54.6	34.8
56.40	17.20	-0.54	-0.79	15.87	.85	.93	926	767.3	54.5	34.4
56.60	17.62	0.05	-0.79	16.89	.82	.91	937	767.2	54.5	34.0
56.80	17.20	0.21	-0.78	16.64	.82	.91	937	767.1	54.5	33.5
57.00	17.10	0.21	-0.78	16.54	.82	.92	935	766.9	54.5	33.1
57.20	16.99	0.21	-0.78	16.42	.83	.92	931	766.8	54.4	32.7
57.40	17.03	0.21	-0.78	16.47	.83	.92	931	766.7	54.4	32.2
57.60	16.56	0.21	-0.77	16.00	.85	.93	926	766.6	54.3	31.8
57.80	16.58	0.23	-0.77	16.03	.85	.93	926	766.5	54.2	31.3
58.00	15.46	0.24	-0.76	14.94	.88	.96	914	766.4	54.2	30.8
37958.50	15.89	0.32	-0.76	15.45	-16.86	-16.79	920	766.1	54.0	29.7
59.00	16.40	-0.19	-0.75	15.46	.86	.80	920	765.8	53.8	28.5
59.50	17.65	-0.84	-0.74	16.07	.84	.78	927	765.5	53.5	27.2
60.00	18.28	-1.42	-0.74	16.13	.84	.77	929	765.3	53.2	26.0
60.50	18.50	-1.95	-0.74	15.80	.85	.78	925	765.0	52.9	24.7
61.00	18.75	-2.38	-0.73	15.64	.86	.79	923	764.7	52.6	23.5
61.50	19.85	-2.73	-0.73	16.38	.84	.77	930	764.5	52.2	22.2
62.00	22.07	-3.06	-0.72	18.29	.78	.72	950	764.2	51.8	20.9
62.50	23.06	-3.34	-0.72	19.00	.76	.70	958	764.0	51.4	19.6

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37962.60	23.55	-3.43	-0.72	19.40	-16.75	-16.69	961	763.9	51.3	19.3
62.80	23.92	-3.54	-0.72	19.67	.75	.68	964	763.8	51.2	18.8
63.00	23.79	-3.64	-0.72	19.43	.75	.69	963	763.7	51.0	18.2
63.20	23.82	-3.75	-0.72	19.35	.75	.69	962	763.6	50.8	17.7
63.40	24.51	-3.86	-0.72	19.94	.74	.68	966	763.5	50.7	17.2
63.60	24.20	-3.97	-0.71	19.52	.75	.69	963	763.4	50.5	16.6
63.80	24.05	-4.07	-0.71	19.26	.76	.69	962	763.3	50.3	16.1
64.00	24.89	-4.17	-0.71	20.01	.74	.68	968	763.3	50.2	15.6
64.20	25.07	-4.26	-0.71	20.10	.74	.68	968	763.2	50.0	15.0
64.40	24.73	-4.34	-0.71	19.68	.75	.69	965	763.1	49.8	14.5
64.60	23.90	-4.42	-0.70	18.78	.77	.71	958	763.0	49.6	13.9
37965.00	22.69	-4.59	-0.70	17.41	-16.80	-16.74	947	762.8	49.3	12.9
65.50	21.30	-4.79	-0.70	15.81	.85	.79	931	762.5	48.9	11.5
66.00	20.74	-4.97	-0.70	15.07	.87	.81	923	762.3	48.4	10.2
66.50	20.55	-5.18	-0.71	14.66	.88	.83	919	762.1	48.0	8.8
67.00	19.70	-5.36	-0.71	13.63	.91	.86	908	761.8	47.6	7.5
67.50	20.03	-5.52	-0.72	13.79	.91	.86	911	761.6	47.1	6.2
68.00	20.29	-5.68	-0.73	13.88	.91	.86	912	761.4	46.7	4.8
68.50	20.20	-5.84	-0.73	13.63	.91	.87	910	761.2	46.4	3.5
69.00	20.24	-6.00	-0.74	13.50	.92	.87	910	760.9	46.0	2.2
69.50	19.99	-6.13	-0.76	13.10	.93	.89	906	760.7	45.6	0.9
70.00	19.84	-6.30	-0.77	12.77	.94	.90	903	760.5	45.3	-0.4
70.50	19.99	-6.45	-0.79	12.75	.94	.89	905	760.3	45.0	-1.6
71.00	20.23	-6.62	-0.81	12.79	.93	.89	907	760.0	44.8	-2.9
71.50	20.42	-6.76	-0.83	12.83	.93	.89	909	759.8	44.5	-4.1
72.00	20.92	-6.94	-0.86	13.12	.92	.88	913	759.6	44.3	-5.3
72.50	21.25	-7.10	-0.88	13.27	.91	.87	916	759.3	44.2	-6.5
37972.60	21.44	-7.13	-0.88	13.43	-16.91	-16.87	918	759.3	44.1	-6.7
72.80	21.10	-7.19	-0.89	13.01	.92	.88	914	759.2	44.1	-7.2
73.00	21.59	-7.27	-0.90	13.42	.90	.86	920	759.1	44.0	-7.6
73.20	21.42	-7.33	-0.91	13.18	.91	.87	918	759.0	44.0	-8.1
73.40	21.09	-7.40	-0.92	12.78	.93	.89	912	758.9	44.0	-8.5
73.60	21.10	-7.46	-0.93	12.71	.93	.89	911	758.8	43.9	-9.0
73.80	21.11	-7.51	-0.94	12.66	.94	.90	910	758.7	43.9	-9.4
74.00	20.96	-7.59	-0.95	12.43	.95	.92	908	758.7	43.9	-9.8
74.20	21.66	-7.62	-0.96	13.08	.92	.89	916	758.6	43.9	-10.3
74.40	21.52	-7.69	-0.97	12.87	.92	.88	917	758.5	43.9	-10.7
74.60	22.23	-7.73	-0.99	13.51	.90	.86	924	758.4	43.9	-11.1
74.80	21.94	-7.78	-1.00	13.16	.91	.87	920	758.3	44.0	-11.5
75.00	22.83	-7.83	-1.01	14.00	.87	.83	933	758.2	44.0	-11.9
75.20	21.89	-7.86	-1.02	13.02	.90	.86	925	758.1	44.0	-12.3
75.40	22.47	-7.92	-1.02	13.53	.89	.85	928	758.0	44.1	-12.7
75.60	22.38	-7.94	-1.03	13.41	.90	.86	925	757.9	44.1	-13.1
75.80	22.47	-8.00	-1.04	13.44	.90	.86	925	757.8	44.2	-13.4
76.00	21.57	-8.04	-1.05	12.48	.94	.90	914	757.7	44.3	-13.8
76.20	21.68	-8.06	-1.06	12.56	.93	.90	915	757.6	44.3	-14.2
76.40	21.81	-8.10	-1.06	12.64	.93	.89	917	757.5	44.4	-14.5
37974.50	21.93	-8.13	-1.06	12.75	-16.92	-16.89	918	757.5	44.5	-14.7
77.00	21.08	-8.25	-1.08	11.74	.96	.93	907	757.2	44.7	-15.5
77.50	20.06	-8.38	-1.10	10.58	-17.01	.98	891	757.0	45.1	-16.3
78.00	20.09	-8.55	-1.11	10.43	.01	.98	890	756.7	45.4	-17.0
78.50	19.97	-8.68	-1.12	10.16	.02	.99	887	756.5	45.9	-17.7
79.00	20.12	-8.79	-1.13	10.20	.02	.99	889	756.2	46.4	-18.3
79.50	20.59	-8.90	-1.14	10.56	.00	.97	896	755.9	46.9	-18.8
80.00	21.17	-9.00	-1.15	11.02	-16.98	.95	904	755.7	47.5	-19.3
80.50	21.11	-9.10	-1.16	10.85	.99	.97	900	755.4	48.1	-19.7
81.00	20.39	-9.19	-1.16	10.04	-17.03	-17.01	889	755.2	48.7	-20.0

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
37981.50	20.59	-9.24	-1.17	10.18	-17.02	-17.00	892	754.9	49.4	-20.2
82.00	20.76	-9.33	-1.18	10.25	.02	.00	894	754.6	50.2	-20.4
82.50	21.32	-9.38	-1.18	10.76	-16.99	-16.97	902	754.3	50.9	-20.5
83.00	22.31	-9.43	-1.19	11.68	.95	.93	916	754.0	51.6	-20.5
37983.20	23.06	-9.43	-1.20	12.43	-16.91	-16.89	928	753.9	51.9	-20.5
83.40	25.45	-9.46	-1.20	14.80	.83	.82	952	753.8	52.3	-20.4
83.60	28.67	-9.46	-1.21	18.01	.74	.72	984	753.7	52.6	-20.4
83.80	26.68	-9.47	-1.21	16.21	.78	.76	971	753.6	52.9	-20.3
84.00	26.77	-9.49	-1.22	16.06	.78	.76	970	753.5	53.2	-20.3
84.20	27.15	-9.49	-1.22	16.44	.77	.75	974	753.4	53.5	-20.2
84.40	28.20	-9.50	-1.22	17.48	.74	.72	982	753.2	53.8	-20.1
84.60	27.41	-9.52	-1.22	16.67	.77	.75	973	753.1	54.1	-20.0
84.80	27.45	-9.53	-1.22	16.70	.77	.76	973	753.0	54.4	-19.8
85.00	26.33	-9.54	-1.23	15.55	.80	.79	963	752.9	54.6	-19.7
37985.50	23.26	-9.55	-1.23	12.48	-16.91	-16.90	930	752.6	55.4	-19.3
86.00	22.01	-9.59	-1.24	11.18	.97	.96	911	752.3	56.1	-18.8
86.50	21.21	-9.64	-1.24	10.33	-17.01	-17.00	897	752.0	56.7	-18.3
87.00	20.84	-9.65	-1.24	9.96	.03	.02	891	751.7	57.3	-17.7
87.50	20.59	-9.66	-1.25	9.68	.05	.04	886	751.3	57.9	-17.0
88.00	20.72	-9.67	-1.25	9.80	.04	.04	887	751.0	58.4	-16.2
88.50	20.90	-9.68	-1.25	9.97	.03	.03	890	750.7	58.9	-15.4
89.00	21.35	-9.70	-1.26	10.39	.02	.02	895	750.4	59.3	-14.5
89.50	22.92	-9.70	-1.26	11.96	-16.95	-16.95	917	750.0	59.7	-13.5
37990.00	26.37	-9.68	-1.26	15.43	-16.83	-16.84	953	749.7	60.0	-12.5
90.20	27.33	-9.67	-1.26	16.40	.81	.81	962	749.6	60.1	-12.1
90.40	26.78	-9.67	-1.26	15.85	.82	.82	958	749.5	60.2	-11.6
90.60	26.40	-9.67	-1.26	15.47	.83	.83	955	749.3	60.3	-11.2
90.80	26.01	-9.68	-1.26	15.07	.84	.85	950	749.2	60.4	-10.8
91.00	25.79	-9.69	-1.26	14.84	.85	.86	947	749.0	60.5	-10.3
91.20	24.72	-9.71	-1.26	13.75	.89	.89	936	748.9	60.5	-9.8
91.40	23.99	-9.72	-1.26	13.01	.92	.92	927	748.8	60.6	-9.4
37991.50	23.92	-9.73	-1.26	12.92	-16.92	-16.93	925	748.7	60.6	-9.1
92.00	23.23	-9.74	-1.26	12.23	.95	.96	914	748.4	60.7	-7.9
92.50	22.67	-9.74	-1.26	11.66	.98	.99	906	748.0	60.8	-6.7
93.00	22.39	-9.74	-1.26	11.38	.99	.99	902	747.7	60.7	-5.4
93.50	21.89	-9.74	-1.26	10.88	-17.01	.02	895	747.3	60.7	-4.1
94.00	21.55	-9.74	-1.26	10.55	.03	.04	889	747.0	60.6	-2.7
94.50	21.22	-9.74	-1.26	10.22	.05	.06	881	746.6	60.4	-1.3
95.00	20.64	-9.76	-1.26	9.63	.08	.10	870	746.3	60.2	0.1
95.50	20.30	-9.78	-1.26	9.26	.10	.12	862	745.9	60.0	1.6
96.00	20.32	-9.82	-1.26	9.24	.10	.12	861	745.5	59.7	3.0
96.50	20.59	-9.85	-1.26	9.47	.09	.11	863	745.2	59.4	4.5
97.00	20.62	-9.87	-1.26	9.48	.10	.12	861	744.8	59.1	6.0
97.50	20.42	-9.93	-1.26	9.23	.11	.13	855	744.5	58.7	7.5
98.00	22.17	-9.97	-1.26	10.94	.03	.06	882	744.1	58.3	9.1
37998.20	22.30	-9.98	-1.26	11.06	-17.02	-17.05	884	744.0	58.2	9.7
98.40	24.25	-10.01	-1.26	12.97	-16.95	-16.97	910	743.8	58.0	10.3
98.60	27.70	-10.04	-1.25	16.40	.84	.87	944	743.7	57.8	10.9
98.80	26.97	-10.07	-1.25	15.65	.87	.90	934	743.5	57.7	11.6
99.00	22.91	-10.08	-1.25	11.58	-17.01	-17.04	888	743.4	57.5	12.2
37999.50	22.45	-10.14	-1.25	11.06	-17.03	-17.06	879	743.0	57.0	13.8
38000.00	22.26	-10.19	-1.24	10.82	.04	.07	874	742.6	56.6	15.3
00.50	22.08	-10.28	-1.24	10.56	.06	.09	869	742.3	56.1	16.9
01.00	21.40	-10.32	-1.24	9.84	.09	.12	856	741.9	55.6	18.5

Table 3 (cont.)

1961 81 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38001.50	22.29	-10.40	-1.24	10.65	-17.05	-17.08	867	741.5	55.1	20.1
02.00	22.92	-10.46	-1.24	11.22	.03	.06	874	741.2	54.6	21.7
38002.20	23.26	-10.49	-1.24	11.52	-17.02	-17.05	878	741.0	54.4	22.3
02.40	24.33	-10.52	-1.24	12.57	-16.98	.01	891	740.9	54.2	22.9
02.60	25.23	-10.55	-1.24	13.44	.94	-16.98	904	740.7	54.0	23.6
02.80	28.96	-10.60	-1.24	17.12	.83	.87	940	740.6	53.8	24.2
03.00	28.02	-10.61	-1.24	16.17	.86	.90	930	740.5	53.6	24.8
03.20	27.41	-10.63	-1.24	15.54	.88	.92	922	740.3	53.4	25.5
03.40	26.81	-10.69	-1.24	14.88	.90	.94	914	740.2	53.2	26.1
03.60	26.70	-10.72	-1.23	14.73	.91	.95	912	740.0	53.0	26.7
03.80	26.58	-10.74	-1.23	14.61	.91	.95	910	739.9	52.8	27.4
38004.00	25.40	-10.77	-1.23	13.40	-16.95	-16.99	896	739.7	52.6	28.0
04.50	23.55	-10.65	-1.23	11.51	-17.02	-17.06	871	739.4	52.1	29.6
05.00	23.01	-10.93	-1.23	10.85	.04	.08	859	739.0	51.6	31.1
05.50	22.86	-11.02	-1.23	10.61	.05	.09	854	738.6	51.2	32.7
06.00	23.79	-11.07	-1.23	11.49	.01	.06	866	738.3	50.7	34.2
06.50	24.36	-11.15	-1.23	11.98	-16.99	.04	871	737.9	50.3	35.7
07.00	26.58	-11.19	-1.23	14.16	.92	-16.97	897	737.6	49.9	37.2
07.50	24.90	-11.26	-1.23	12.41	.98	-17.03	874	737.2	49.5	38.7
08.00	24.03	-11.33	-1.24	11.46	-17.01	.06	859	736.9	49.2	40.1
08.50	24.13	-11.37	-1.24	11.52	.01	.06	859	736.5	48.9	41.5
09.00	24.88	-11.46	-1.24	12.18	-16.98	.03	866	736.2	48.6	43.0
38009.40	26.38	-11.50	-1.24	13.64	-16.93	-16.99	886	735.9	48.4	44.1
09.60	27.23	-11.53	-1.24	14.46	.91	.96	894	735.8	48.3	44.6
09.80	29.74	-11.57	-1.24	16.93	.84	.89	919	735.6	48.2	45.1
10.00	29.25	-11.58	-1.25	16.42	.85	.91	915	735.5	48.1	45.7
10.20	27.59	-11.60	-1.25	14.74	.89	.95	897	735.3	48.0	46.2
10.40	27.59	-11.62	-1.25	14.72	.90	.95	894	735.2	48.0	46.7
38010.50	27.43	-11.65	-1.26	14.52	-16.90	-16.96	892	735.1	48.0	47.0
11.00	26.28	-11.70	-1.26	13.33	.94	.99	876	734.8	47.8	48.3
11.50	25.90	-11.75	-1.26	12.89	.95	-17.01	868	734.5	47.7	49.5
12.00	25.81	-11.79	-1.27	12.74	.96	.01	865	734.1	47.7	50.7
12.50	25.11	-11.79	-1.27	12.05	.98	.04	854	733.8	47.7	51.9
13.00	24.71	-11.79	-1.28	11.63	.99	.05	846	733.5	47.8	53.0
13.50	23.95	-11.79	-1.28	10.87	-17.02	.08	833	733.1	47.9	54.1
14.00	22.59	-11.79	-1.27	9.53	.08	.13	807	732.8	48.0	55.1
14.50	22.01	-11.79	-1.27	8.95	.10	.16	793	732.5	48.3	56.0
15.00	20.35	-11.79	-1.26	7.30	.19	.25	747	732.1	48.5	56.9
38015.40	23.10	-11.71	-1.25	10.15	-17.05	-17.11	816	731.9	48.8	57.6
15.60	27.08	-11.68	-1.24	14.16	-16.90	-16.96	879	731.7	48.9	57.9
15.80	28.06	-11.67	-1.24	15.14	.87	.94	889	731.6	49.1	58.3
16.00	30.03	-11.66	-1.23	17.14	.82	.89	910	731.5	49.2	58.6
16.20	29.84	-11.63	-1.22	16.99	.82	.90	911	731.3	49.4	58.9
16.40	28.65	-11.58	-1.22	15.85	.85	.93	897	731.2	49.6	59.1
16.60	27.63	-11.53	-1.21	14.88	.88	.95	885	731.1	49.7	59.4
16.80	27.94	-11.48	-1.20	15.25	.87	.94	889	730.9	49.9	59.7
17.00	28.91	-11.45	-1.20	16.26	.84	.91	901	730.8	50.1	59.9
17.20	28.55	-11.36	-1.19	16.00	.85	.92	898	730.7	50.3	60.2
17.40	26.20	-11.31	-1.18	13.71	.91	.99	871	730.6	50.5	60.4
17.60	26.01	-11.26	-1.17	13.58	.92	.99	869	730.4	50.8	60.6
17.80	24.92	-11.19	-1.16	12.57	.95	.91	854	730.3	51.0	60.8
38018.00	24.34	-11.14	-1.16	12.04	-16.97	-16.93	846	730.2	51.2	61.0
18.50	24.41	-10.97	-1.14	12.31	.96	.92	850	729.8	51.8	61.4
19.00	24.42	-10.82	-1.12	12.49	.95	.91	853	729.5	52.4	61.7

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38019.50	23.40	-10.61	-1.11	11.67	-16.98	-16.95	839	729.2	53.1	62.0
20.00	21.86	-10.43	-1.09	10.34	-17.04	-17.00	815	728.9	53.7	62.2
20.50	20.41	-10.22	-1.06	9.13	.09	.06	789	728.5	54.4	62.3
21.00	19.46	-9.97	-1.04	8.45	.12	.09	773	728.2	55.1	62.3
21.50	19.03	-9.70	-1.02	8.31	.13	.10	771	727.9	55.8	62.2
22.00	18.36	-9.43	-1.00	7.93	.15	.12	764	727.6	56.4	62.1
22.50	17.38	-9.00	-0.98	7.40	.18	.16	748	727.3	57.1	61.8
23.00	16.66	-8.20	-0.96	7.50	.18	.15	750	726.9	57.7	61.5
23.50	16.06	-6.91	-0.94	8.23	.14	.11	773	726.6	58.3	61.1
38024.00	16.03	-5.36	-0.92	9.75	-17.06	-17.04	810	726.3	58.9	60.7
24.20	16.21	-4.88	-0.91	10.43	.03	.01	823	726.2	59.1	60.4
24.40	17.23	-4.34	-0.90	11.99	-16.98	-16.96	849	726.0	59.3	60.2
24.60	17.59	-3.86	-0.89	12.84	.95	.93	860	725.9	59.5	60.0
24.80	16.61	-3.38	-0.88	12.36	.97	.94	852	725.8	59.7	59.7
38025.00	15.44	-2.89	-0.87	11.68	-16.99	-16.97	842	725.6	59.9	59.5
25.50	12.80	-1.88	-0.84	10.09	-17.05	-17.04	816	725.3	60.3	58.8
26.00	9.24	-0.95	-0.82	7.47	.19	.17	756	725.0	60.7	58.0
26.50	7.47	-0.21	-0.80	6.46	.25	.23	724	724.7	61.1	57.2
27.00	8.44	0.16	-0.78	7.82	.17	.15	769	724.3	61.4	56.3
27.50	8.32	0.20	-0.76	7.77	.17	.16	768	724.0	61.6	55.4
28.00	7.60	0.21	-0.74	7.08	.22	.20	751	723.7	61.8	54.4
28.50	7.72	0.24	-0.72	7.23	.21	.20	759	723.3	61.9	53.4
29.00	8.36	0.25	-0.70	7.90	.17	.16	778	723.0	62.0	52.3
29.50	9.39	0.27	-0.68	8.97	.12	.11	803	722.7	62.0	51.1
30.00	10.43	0.29	-0.66	10.06	.07	.06	827	722.3	62.0	49.9
30.50	10.73	0.31	-0.64	10.40	.06	.05	836	722.0	61.9	48.7
31.00	9.20	0.32	-0.63	8.89	.13	.12	809	721.7	61.8	47.4
31.50	8.60	0.33	-0.62	8.32	.16	.15	800	721.3	61.6	46.1
32.00	8.93	0.34	-0.60	8.67	.14	.14	810	721.0	61.4	44.8
32.50	9.20	0.38	-0.59	8.98	.13	.12	818	720.6	61.2	43.4
33.00	9.72	0.41	-0.58	9.55	.10	.10	830	720.3	60.9	42.0
33.50	10.52	0.42	-0.56	10.38	.07	.07	845	719.9	60.6	40.5
34.00	11.26	0.43	-0.54	11.15	.04	.04	858	719.6	60.3	39.1
34.50	11.14	0.43	-0.53	11.04	.04	.04	858	719.2	59.9	37.6
35.00	11.17	0.44	-0.52	11.09	.04	.04	860	718.9	59.5	36.1
35.50	10.76	0.45	-0.51	10.70	.06	.06	857	718.5	59.1	34.6
36.00	10.82	0.48	-0.50	10.80	.05	.06	859	718.2	58.7	33.1
36.50	11.05	0.48	-0.49	11.05	.04	.05	864	717.8	58.2	31.5
37.00	11.31	0.48	-0.48	11.32	.03	.04	869	717.4	57.8	30.0
37.50	11.43	0.47	-0.48	11.42	.03	.04	872	717.1	57.3	28.4
38.00	10.86	0.49	-0.48	10.87	.05	.06	866	716.7	56.8	26.8
38.50	10.70	0.51	-0.47	10.74	.06	.07	865	716.3	56.3	25.2
39.00	11.00	0.54	-0.48	11.06	.04	.06	871	716.0	55.8	23.6
39.50	11.42	0.58	-0.48	11.52	.02	.04	878	715.6	55.3	22.0
40.00	10.68	0.63	-0.48	10.83	.05	.07	870	715.2	54.8	20.4
40.50	12.05	-0.16	-0.48	11.41	.02	.05	879	714.8	54.3	18.8
41.00	15.03	-1.95	-0.48	12.60	-16.97	.00	895	714.4	53.8	17.3
41.50	15.81	-2.99	-0.49	12.33	.98	.01	893	714.1	53.3	15.7
42.00	17.62	-3.67	-0.50	13.45	.94	-16.97	908	713.7	52.8	14.1
38042.20	19.11	-3.89	-0.50	14.71	-16.89	-16.92	922	713.5	52.7	13.4
42.40	19.63	-4.13	-0.50	15.01	.87	.90	930	713.4	52.5	12.8
42.60	20.82	-4.32	-0.50	16.00	.84	.87	939	713.2	52.3	12.2
42.80	21.16	-4.50	-0.50	16.16	.84	.87	939	713.0	52.1	11.5
43.00	21.67	-4.65	-0.51	16.51	.83	.87	940	712.9	51.9	10.9
43.20	21.84	-4.82	-0.51	16.50	.83	.87	940	712.7	51.8	10.3
43.40	22.33	-4.96	-0.51	16.86	.82	.86	945	712.6	51.6	9.7
43.60	22.15	-5.13	-0.52	16.50	.82	.86	944	712.4	51.4	9.0

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38043.80	21.63	-5.25	-0.52	15.86	-16.83	-16.88	940	712.2	51.3	8.4
44.00	22.44	-5.39	-0.52	16.53	.81	.86	947	712.1	51.1	7.8
44.20	22.58	-5.52	-0.52	16.53	.81	.86	946	711.9	51.0	7.2
44.40	22.04	-5.64	-0.53	15.87	.83	.87	942	711.8	50.8	6.6
44.60	21.83	-5.78	-0.53	15.52	.83	.88	941	711.6	50.7	6.0
44.80	21.61	-5.90	-0.54	15.17	.85	.89	936	711.4	50.5	5.3
45.00	21.22	-6.01	-0.54	14.66	.87	.91	930	711.3	50.4	4.7
45.20	20.65	-6.12	-0.54	13.99	.89	.93	924	711.1	50.3	4.1
45.40	20.75	-6.24	-0.54	13.97	.89	.93	924	711.0	50.2	3.5
45.60	21.01	-6.35	-0.55	14.11	.88	.93	926	710.8	50.0	2.9
45.80	20.92	-6.45	-0.56	13.91	.88	.93	927	710.6	49.9	2.3
38046.00	20.92	-6.56	-0.56	13.79	-16.88	-16.93	925	710.5	49.8	1.8
46.50	20.31	-6.83	-0.57	12.91	.91	.96	916	710.0	49.6	0.3
47.00	19.93	-7.08	-0.59	12.26	.94	.99	908	709.6	49.4	-1.1
47.50	19.96	-7.30	-0.60	12.06	.94	-17.00	906	709.2	49.2	-2.6
48.00	19.85	-7.53	-0.62	11.71	.95	.01	903	708.8	49.1	-3.9
48.50	20.34	-7.74	-0.64	11.96	.93	.00	908	708.3	49.0	-5.3
49.00	20.05	-7.95	-0.66	11.44	.96	.02	900	707.9	49.0	-6.6
49.50	19.43	-8.16	-0.69	10.58	-17.00	.06	888	707.5	49.0	-7.9
50.00	18.82	-8.36	-0.72	9.74	.04	.11	875	707.0	49.1	-9.1
50.50	18.09	-8.55	-0.76	8.78	.09	.16	860	706.6	49.3	-10.3
51.00	17.41	-8.74	-0.79	7.88	.13	.20	846	706.2	49.5	-11.4
51.50	17.25	-8.92	-0.83	7.50	.15	.22	839	705.7	49.7	-12.5
52.00	18.33	-9.09	-0.88	8.36	.10	.17	855	705.3	50.0	-13.6
52.50	18.92	-9.26	-0.92	8.74	.07	.15	862	704.8	50.4	-14.5
53.00	19.02	-9.42	-0.96	8.64	.08	.16	859	704.3	50.8	-15.5
53.50	19.09	-9.56	-1.01	8.52	.09	.17	857	703.9	51.3	-16.3
54.00	19.74	-9.72	-1.05	8.96	.06	.14	865	703.4	51.8	-17.1
54.50	21.73	-9.85	-1.09	10.79	-16.98	.06	888	702.9	52.4	-17.8
55.00	20.62	-9.97	-1.13	9.52	-17.04	.12	870	702.5	53.0	-18.5
55.50	18.74	-10.09	-1.16	7.49	.14	.23	837	702.0	53.6	-19.0
56.00	18.02	-10.18	-1.18	6.66	.20	.29	819	701.5	54.3	-19.5
56.50	18.22	-10.29	-1.20	6.73	.19	.28	820	701.0	55.0	-19.9
57.00	18.31	-10.39	-1.22	6.70	.19	.28	819	700.5	55.8	-20.3
57.50	18.39	-10.47	-1.24	6.68	.19	.28	819	700.0	56.5	-20.5
58.00	19.06	-10.57	-1.25	7.24	.15	.25	830	699.5	57.3	-20.7
58.50	21.53	-10.63	-1.26	9.63	.02	.13	868	699.0	58.0	-20.8
59.00	21.62	-10.71	-1.26	9.65	.01	.12	869	698.5	58.8	-20.8
38059.20	22.99	-10.73	-1.26	11.00	-16.94	-17.06	888	698.3	59.1	-20.8
59.40	24.01	-10.75	-1.27	11.99	.89	.01	901	698.1	59.4	-20.7
59.60	29.85	-10.78	-1.27	17.80	.72	-16.84	953	697.9	59.7	-20.7
59.80	32.86	-10.81	-1.28	20.78	.65	.77	973	697.7	60.0	-20.6
60.00	33.05	-10.83	-1.28	20.94	.65	.77	973	697.5	60.2	-20.6
60.20	33.06	-10.83	-1.28	20.95	.64	.77	975	697.3	60.5	-20.5
60.40	33.24	-10.83	-1.28	21.13	.63	.76	977	697.1	60.8	-20.4
60.60	33.92	-10.83	-1.29	21.80	.62	.75	980	696.9	61.1	-20.3
60.80	34.43	-10.83	-1.30	22.30	.61	.74	982	696.7	61.3	-20.2
61.00	31.61	-10.83	-1.30	19.48	.68	.81	961	696.5	61.6	-20.0
61.20	27.96	-10.84	-1.30	15.82	.79	.91	928	696.3	61.8	-19.9
61.40	27.64	-10.85	-1.30	15.49	.81	.93	923	696.0	62.1	-19.7
61.60	27.48	-10.85	-1.30	15.33	.80	.93	923	695.8	62.3	-19.6
61.80	26.99	-10.85	-1.31	14.83	.81	.94	921	695.6	62.6	-19.4
38062.00	26.23	-10.86	-1.31	14.06	-16.84	-16.97	912	695.4	62.8	-19.2
62.50	24.76	-10.86	-1.32	12.58	.89	-17.02	894	694.9	63.3	-18.7
63.00	23.55	-10.86	-1.32	11.37	.94	.07	878	694.4	63.8	-18.1
63.50	23.14	-10.85	-1.32	10.97	.96	.09	872	693.8	64.2	-17.4
64.00	22.81	-10.85	-1.32	10.64	.97	.11	866	693.3	64.6	-16.7

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38064.50	22.65	-10.84	-1.32	10.50	-16.98	-17.12	862	692.8	64.9	-15.9
65.00	22.69	-10.83	-1.33	10.53	.98	.12	861	692.2	65.2	-15.1
65.50	23.03	-10.81	-1.33	10.89	.96	.11	865	691.7	65.4	-14.2
66.00	23.28	-10.74	-1.32	11.17	.95	.10	866	691.1	65.6	-13.3
66.50	23.27	-10.73	-1.32	11.22	.95	.10	864	690.6	65.7	-12.3
67.00	23.28	-10.72	-1.32	11.24	.96	.11	862	690.0	65.7	-11.3
67.50	23.04	-10.69	-1.32	11.03	.97	.12	857	689.5	65.7	-10.3
68.00	23.03	-10.64	-1.31	11.07	.97	.12	855	688.9	65.7	-9.2
68.50	23.14	-10.61	-1.31	11.22	.96	.12	854	688.4	65.6	-8.1
69.00	22.71	-10.59	-1.31	10.81	.98	.14	846	687.8	65.5	-6.9
69.50	22.56	-10.57	-1.30	10.69	.99	.15	843	687.2	65.3	-5.7
38070.00	26.26	-10.54	-1.30	14.43	-16.85	-16.70	883	686.7	65.1	-4.5
70.20	34.82	-10.53	-1.30	22.99	.62	.47	949	686.5	65.0	-4.0
70.40	36.06	-10.52	-1.30	24.24	.59	.44	959	686.2	64.9	-3.5
70.60	34.98	-10.51	-1.30	23.17	.61	.46	951	686.0	64.8	-3.0
70.80	34.06	-10.51	-1.30	22.25	.64	.49	943	685.8	64.7	-2.5
71.00	32.31	-10.51	-1.29	20.52	.67	.53	931	685.6	64.6	-2.0
71.20	30.57	-10.51	-1.29	18.78	.71	.57	918	685.3	64.5	-1.5
71.40	28.99	-10.51	-1.29	17.20	.76	.61	905	685.1	64.3	-1.0
71.60	28.58	-10.51	-1.28	16.80	.77	.63	900	684.9	64.2	-0.5
71.80	28.67	-10.51	-1.28	16.89	.77	.63	899	684.7	64.1	0.0
72.00	28.43	-10.51	-1.28	16.64	.77	.63	897	684.4	63.9	0.5
72.20	29.02	-10.51	-1.28	17.23	.76	.62	902	684.2	63.8	1.0
72.40	29.28	-10.51	-1.28	17.49	.75	.61	903	684.0	63.7	1.6
72.60	29.04	-10.51	-1.28	17.25	.76	.62	899	683.8	63.5	2.1
72.80	28.63	-10.51	-1.27	16.85	.78	.65	892	683.5	63.4	2.6
73.00	28.89	-10.51	-1.27	17.11	.78	.64	893	683.3	63.2	3.1
73.20	29.15	-10.51	-1.27	17.38	.76	.63	896	683.1	63.1	3.7
73.40	29.58	-10.51	-1.26	17.81	.75	.62	899	682.9	62.9	4.2
73.60	29.01	-10.52	-1.26	17.23	.76	.63	894	682.6	62.7	4.7
73.80	28.77	-10.52	-1.26	17.00	.77	.64	892	682.4	62.6	5.3
74.00	28.87	-10.53	-1.26	17.08	.76	.64	893	682.2	62.4	5.8
38074.50	28.78	-10.57	-1.25	16.96	-16.77	-16.65	888	681.6	62.0	7.1
75.00	27.27	-10.60	-1.24	15.43	.82	.70	871	681.0	61.5	8.5
75.50	26.31	-10.63	-1.24	14.44	.85	.74	859	680.5	61.1	9.8
76.00	26.21	-10.67	-1.24	14.31	.86	.75	855	679.9	60.7	11.2
76.50	26.05	-10.72	-1.23	14.10	.87	.77	851	679.3	60.2	12.5
77.00	26.05	-10.74	-1.22	14.08	.87	.77	848	678.8	59.8	13.9
77.50	25.68	-10.82	-1.22	13.65	.89	.79	842	678.2	59.3	15.2
78.00	25.79	-10.87	-1.21	13.71	.88	.79	841	677.7	58.9	16.6
78.50	25.71	-10.93	-1.20	13.58	.89	.80	838	677.1	58.4	17.9
79.00	25.19	-11.01	-1.20	12.98	.90	.82	830	676.5	58.0	19.2
79.50	25.95	-11.06	-1.19	13.69	.88	.80	836	676.0	57.6	20.6
80.00	26.57	-11.15	-1.19	14.23	.86	.78	840	675.4	57.2	21.9
80.50	27.23	-11.22	-1.18	14.83	.84	.76	845	674.9	56.9	23.2
81.00	27.75	-11.29	-1.18	15.28	.82	.74	849	674.3	56.5	24.4
81.50	28.06	-11.36	-1.17	15.52	.82	.74	848	673.7	56.2	25.7
82.00	28.04	-11.45	-1.16	15.43	.82	.75	844	673.2	55.9	27.0
82.50	28.20	-11.53	-1.16	15.50	.82	.75	843	672.6	55.6	28.2
83.00	27.69	-11.61	-1.15	14.93	.83	.77	836	672.1	55.4	29.4
83.50	27.46	-11.68	-1.14	14.63	.84	.78	832	671.5	55.2	30.6
84.00	27.21	-11.79	-1.13	14.24	.85	.79	827	671.0	55.0	31.7
84.50	26.98	-11.87	-1.12	13.99	.86	.81	822	670.5	54.9	32.8
85.00	26.77	-11.94	-1.12	13.70	.87	.82	817	669.9	54.8	33.9
85.50	26.90	-12.01	-1.11	13.78	.87	.82	817	669.4	54.8	35.0
86.00	27.38	-12.08	-1.10	14.20	.85	.81	820	668.8	54.8	36.0
86.50	27.08	-12.12	-1.10	13.85	.86	.82	816	668.3	54.9	37.0
87.00	26.49	-12.20	-1.10	13.19	.88	.84	808	667.8	55.0	37.9

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38087.50	26.11	-12.25	-1.09	12.77	-16.90	-16.86	801	667.2	55.2	38.8
88.00	25.32	-12.31	-1.08	11.94	.92	.89	790	666.7	55.4	39.6
38088.80	24.15	-12.39	-1.08	10.68	-16.96	-16.93	773	665.9	55.9	40.8
89.00	26.97	-12.40	-1.08	13.49	.87	.84	806	665.7	56.0	41.1
89.20	27.80	-12.41	-1.07	14.32	.84	.81	814	665.5	56.2	41.4
89.40	30.14	-12.42	-1.07	16.64	.76	.73	838	665.3	56.3	41.7
89.60	30.15	-12.44	-1.07	16.65	.76	.73	838	665.1	56.5	41.9
89.80	27.85	-12.45	-1.07	14.33	.83	.80	815	664.9	56.7	42.2
90.00	27.88	-12.46	-1.07	14.35	.83	.80	815	664.7	56.9	42.4
90.20	27.41	-12.47	-1.07	13.88	.84	.82	809	664.5	57.0	42.6
38090.50	27.49	-12.48	-1.06	13.95	-16.84	-16.82	808	664.2	57.4	42.9
91.00	27.04	-12.51	-1.06	13.47	.86	.84	801	663.6	57.9	43.4
91.50	26.65	-12.52	-1.06	13.07	.87	.86	796	663.1	58.5	43.8
92.00	26.59	-12.53	-1.06	13.00	.87	.86	795	662.6	59.1	44.2
92.50	26.53	-12.53	-1.05	12.95	.88	.87	793	662.2	59.8	44.4
93.00	26.40	-12.52	-1.05	12.83	.88	.87	791	661.7	60.5	44.6
93.50	26.69	-12.50	-1.05	13.14	.87	.86	793	661.2	61.2	44.7
94.00	27.36	-12.46	-1.04	13.87	.84	.84	801	660.7	62.0	44.7
94.50	27.35	-12.44	-1.04	13.88	.84	.84	801	660.2	62.8	44.7
95.00	28.18	-12.39	-1.04	14.75	.81	.81	809	659.7	63.6	44.5
95.50	27.21	-12.34	-1.04	13.83	.84	.84	799	659.3	64.3	44.3
38095.60	25.95	-12.33	-1.04	12.58	-16.88	-16.89	785	659.2	64.5	44.2
95.80	26.90	-12.32	-1.04	13.54	.85	.86	794	659.0	64.8	44.1
96.00	31.01	-12.31	-1.04	17.66	.73	.73	832	658.8	65.1	44.0
96.20	38.29	-12.27	-1.04	24.97	.56	.57	883	658.6	65.4	43.8
96.40	39.44	-12.23	-1.04	26.17	.53	.54	891	658.4	65.7	43.7
96.60	38.11	-12.22	-1.04	24.85	.55	.56	884	658.3	66.0	43.5
96.80	36.13	-12.19	-1.04	22.90	.59	.60	873	658.1	66.3	43.2
97.00	35.32	-12.15	-1.04	22.13	.61	.62	867	657.9	66.6	43.1
97.20	35.85	-12.11	-1.04	22.69	.60	.61	868	657.7	66.9	42.9
97.40	35.29	-12.09	-1.04	22.15	.61	.63	865	657.5	67.2	42.7
97.60	34.79	-12.04	-1.04	21.71	.62	.64	861	657.4	67.5	42.4
97.80	34.15	-12.01	-1.04	21.10	.64	.66	856	657.2	67.8	42.2
98.00	34.51	-11.97	-1.04	21.50	.63	.65	857	657.0	68.0	41.9
98.20	35.06	-11.93	-1.04	22.09	.62	.63	862	656.8	68.3	41.7
98.40	35.63	-11.90	-1.04	22.69	.60	.62	866	656.6	68.5	41.4
98.60	35.71	-11.86	-1.05	22.80	.60	.62	867	656.5	68.8	41.1
98.80	35.97	-11.81	-1.05	23.10	.58	.60	871	656.3	69.0	40.8
99.00	37.90	-11.78	-1.05	25.07	.54	.56	883	656.1	69.3	40.5
99.20	35.87	-11.74	-1.06	23.07	.58	.60	870	655.9	69.5	40.1
99.40	33.68	-11.68	-1.06	20.94	.64	.65	854	655.8	69.7	39.8
99.60	33.17	-11.64	-1.06	20.47	.66	.68	847	655.6	69.9	39.4
99.80	32.01	-11.59	-1.06	19.36	.68	.71	839	655.4	70.1	39.1
38100.00	31.35	-11.55	-1.06	18.75	.69	.72	836	655.2	70.3	38.7
00.20	30.87	-11.49	-1.06	18.32	.70	.73	833	655.1	70.5	38.3
00.40	30.41	-11.45	-1.07	17.89	.71	.74	828	654.9	70.7	37.9
38100.50	30.27	-11.42	-1.07	17.79	-16.72	-16.75	827	654.8	70.8	37.7
01.00	29.47	-11.26	-1.07	17.15	.75	.78	818	654.4	71.2	36.7
01.50	29.19	-11.13	-1.08	16.98	.75	.79	815	654.0	71.6	35.6
02.00	28.51	-10.98	-1.08	16.45	.77	.80	810	653.6	71.9	34.4
02.50	28.39	-10.83	-1.08	16.48	.78	.81	807	653.1	72.1	33.2
03.00	28.29	-10.68	-1.08	16.53	.78	.81	806	652.7	72.3	32.0
03.50	28.24	-10.52	-1.08	16.64	.77	.81	807	652.3	72.4	30.7
04.00	28.25	-10.38	-1.08	16.79	.77	.81	807	651.9	72.5	29.3
04.50	28.32	-10.25	-1.08	16.99	.76	.81	808	651.5	72.6	27.9
05.00	28.72	-10.11	-1.09	17.52	.75	.80	811	651.1	72.6	26.5

Table 3 (cont.)

1961 $\delta 1$ (Explorer 9)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38105.50	29.32	-9.98	-1.09	18.25	-16.73	-16.78	815	650.7	72.5	25.0
06.00	31.01	-9.87	-1.09	20.05	.68	.74	827	650.3	72.4	23.5
06.50	32.08	-9.78	-1.09	21.21	.65	.71	835	649.9	72.3	22.0
07.00	33.61	-9.68	-1.10	22.83	.62	.68	844	649.6	72.1	20.5
07.50	34.17	-9.63	-1.10	23.45	.61	.67	846	649.2	71.9	18.9
08.00	33.36	-9.56	-1.10	22.70	.63	.69	841	648.8	71.7	17.3
08.50	32.31	-9.54	-1.10	21.67	.65	.71	833	648.4	71.4	15.7
09.00	31.36	-9.54	-1.11	20.71	.67	.74	826	648.0	71.1	14.0
09.50	30.84	-9.54	-1.12	20.18	.68	.75	823	647.7	70.8	12.4
10.00	29.32	-9.56	-1.13	18.63	.72	.79	810	647.3	70.4	10.7
10.50	28.29	-9.62	-1.14	17.54	.75	.82	801	646.9	70.1	9.0
11.00	30.25	-9.66	-1.15	19.44	.70	.77	814	646.5	69.7	7.3
11.50	32.64	-9.74	-1.17	21.73	.64	.72	831	646.2	69.3	5.6
12.00	33.68	-9.83	-1.18	22.67	.62	.70	835	645.8	68.9	3.9
12.50	33.30	-9.92	-1.20	22.18	.64	.72	830	645.4	68.5	2.2
13.00	33.07	-10.01	-1.22	21.84	.64	.72	827	645.0	68.1	0.4
13.50	33.00	-10.14	-1.24	21.62	.65	.73	825	644.7	67.7	-1.3
14.00	32.66	-10.27	-1.26	21.13	.66	.74	820	644.3	67.2	-3.0
14.50	32.20	-10.40	-1.28	20.52	.67	.76	816	643.9	66.8	-4.7
15.00	31.77	-10.52	-1.30	19.95	.68	.77	812	643.6	66.4	-6.5
15.50	31.19	-10.63	-1.31	19.24	.70	.79	806	643.2	66.0	-8.2
16.00	31.02	-10.75	-1.33	18.93	.71	.80	803	642.8	65.6	-9.9
16.50	31.42	-10.91	-1.34	19.16	.69	.79	805	642.4	65.2	-11.6
17.00	31.67	-11.03	-1.36	19.27	.68	.78	807	642.1	64.9	-13.3
17.50	32.03	-11.16	-1.38	19.49	.68	.78	808	641.7	64.5	-15.0
18.00	32.28	-11.30	-1.38	19.60	.68	.78	807	641.3	64.2	-16.6
18.50	32.36	-11.46	-1.40	19.50	.68	.78	805	640.9	63.9	-18.3
19.00	32.58	-11.58	-1.42	19.58	.68	.78	805	640.5	63.6	-19.9
19.50	32.81	-11.72	-1.43	19.66	.67	.78	805	640.2	63.4	-21.5
20.00	33.42	-11.88	-1.44	20.10	.65	.77	809	639.8	63.2	-23.1
20.50	33.87	-12.01	-1.46	20.41	.64	.76	813	639.4	63.0	-24.7
21.00	34.18	-12.15	-1.48	20.56	.64	.76	810	639.0	62.8	-26.2
21.50	33.07	-12.29	-1.49	19.29	.68	.79	799	638.6	62.7	-27.8
22.00	31.28	-12.39	-1.50	17.39	.72	.84	787	638.2	62.7	-29.2
22.50	30.59	-12.51	-1.52	16.56	.73	.86	780	637.8	62.7	-30.7
23.00	31.09	-12.61	-1.53	16.95	.73	.85	781	637.4	62.7	-32.1
38123.20	31.11	-12.65	-1.54	16.92	-16.73	-16.85	780	637.2	62.8	-32.6
23.40	32.80	-12.67	-1.54	18.59	.68	.81	794	637.1	62.8	-33.2
23.60	33.16	-12.72	-1.54	18.90	.66	.79	799	636.9	62.8	-33.7
23.80	35.85	-12.76	-1.55	21.54	.59	.73	818	636.7	62.9	-34.3
24.00	40.18	-12.79	-1.56	25.84	.51	.65	842	636.6	63.0	-34.8
24.20	42.20	-12.84	-1.56	27.80	.47	.61	853	636.4	63.0	-35.3
24.40	41.07	-12.86	-1.56	26.65	.49	.63	848	636.2	63.1	-35.8
24.60	39.28	-12.89	-1.57	24.83	.53	.66	836	636.1	63.2	-36.3
24.80	38.32	-12.95	-1.57	23.80	.55	.69	829	635.9	63.3	-36.8
25.00	37.53	-12.97	-1.58	22.97	.56	.70	824	635.7	63.4	-37.3
25.20	37.56	-12.99	-1.58	22.98	.57	.71	823	635.6	63.5	-37.8
25.40	37.59	-13.04	-1.58	22.97	.57	.71	822	635.4	63.7	-38.2
25.60	37.45	-13.07	-1.58	22.81	.56	.71	823	635.2	63.8	-38.7
25.80	36.66	-13.09	-1.59	21.98	.58	.72	817	635.0	63.9	-39.2
26.00	35.70	-13.11	-1.59	21.00	.60	.75	810	634.9	64.1	-39.6
26.20	35.40	-13.15	-1.59	20.66	.61	.75	808	634.7	64.3	-40.0
26.40	34.94	-13.17	-1.59	20.18	.62	.76	805	634.5	64.4	-40.5
38126.50	34.89	-13.19	-1.59	20.12	-16.62	-16.76	805	634.4	64.5	-40.7
27.00	34.30	-13.22	-1.59	19.49	.63	.78	800	634.0	65.0	-41.7
27.50	33.13	-13.28	-1.59	18.25	.67	.81	789	633.5	65.5	-42.6
28.00	32.73	-13.30	-1.59	17.84	.68	.82	785	633.1	66.1	-43.5
28.50	32.85	-13.31	-1.58	17.95	.67	.82	785	632.6	66.7	-44.3

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38129.00	3.29	-1.33	-0.16	1.80	-16.67	-16.82	784	632.2	67.4	-45.0
29.50	3.24	-1.33	-0.16	1.75	.69	.84	777	631.7	68.1	-45.6
30.00	3.20	-1.33	-0.16	1.71	.70	.85	773	631.2	68.8	-46.2
30.50	3.19	-1.33	-0.15	1.70	.70	.86	772	630.7	69.6	-46.7
31.00	3.33	-1.33	-0.15	1.84	.66	.82	783	630.3	70.4	-47.1
31.50	3.50	-1.33	-0.15	2.02	.61	.78	798	629.8	71.2	-47.4
32.00	3.69	-1.32	-0.15	2.22	.56	.74	810	629.2	72.0	-47.6
32.50	3.89	-1.32	-0.15	2.42	.52	.70	822	628.7	72.8	-47.7
38132.60	3.93	-1.32	-0.15	2.46	-16.52	-16.28	823	628.6	73.0	-47.8
32.80	4.06	-1.32	-0.15	2.60	.49	.24	832	628.4	73.3	-47.8
33.00	4.12	-1.31	-0.15	2.66	.47	.23	835	628.2	73.6	-47.8
33.20	4.47	-1.31	-0.15	3.02	.42	.18	852	628.0	73.9	-47.8
33.40	4.31	-1.30	-0.14	2.86	.45	.21	843	627.8	74.2	-47.8
33.60	4.21	-1.30	-0.14	2.77	.47	.23	837	627.6	74.5	-47.8
33.80	4.07	-1.30	-0.14	2.63	.48	.25	832	627.4	74.8	-47.7
34.00	4.07	-1.29	-0.14	2.64	.47	.24	833	627.2	75.1	-47.7
34.20	4.16	-1.29	-0.14	2.73	.46	.22	838	627.0	75.4	-47.6
34.40	4.65	-1.28	-0.14	3.22	.38	.15	860	626.7	75.7	-47.5
34.60	4.35	-1.28	-0.14	2.94	.43	.20	845	626.5	76.0	-47.4
34.80	3.69	-1.27	-0.14	2.28	.55	.32	810	626.3	76.3	-47.3
38135.00	3.43	-1.27	-0.14	2.02	-16.60	-16.38	793	626.1	76.6	-47.2
35.50	3.43	-1.25	-0.14	2.04	.61	.39	791	625.5	77.2	-46.9
36.00	3.35	-1.24	-0.13	1.97	.62	.40	786	625.0	77.9	-46.5
36.50	3.31	-1.22	-0.13	1.96	.62	.41	785	624.4	78.4	-46.0
37.00	3.34	-1.21	-0.13	2.00	.62	.41	786	623.8	79.0	-45.4
37.50	3.38	-1.19	-0.13	2.07	.60	.39	791	623.3	79.4	-44.8
38.00	3.54	-1.17	-0.13	2.25	.55	.35	804	622.7	79.8	-44.1
38.50	3.66	-1.15	-0.12	2.39	.53	.32	811	622.1	80.2	-43.4
39.00	3.60	-1.12	-0.12	2.35	.54	.34	806	621.5	80.5	-42.6
39.50	3.39	-1.10	-0.12	2.17	.58	.39	794	620.9	80.7	-41.7
40.00	3.19	-1.07	-0.12	2.00	.63	.44	780	620.3	80.9	-40.8
38140.20	3.11	-1.06	-0.12	1.94	-16.65	-16.47	774	620.0	81.0	-40.4
40.40	3.13	-1.05	-0.12	1.96	.65	.47	775	619.8	81.0	-40.0
40.60	3.10	-1.03	-0.12	1.94	.65	.47	774	619.5	81.1	-39.6
40.80	3.03	-1.02	-0.12	1.90	.66	.47	772	619.3	81.1	-39.2
41.00	3.01	-1.01	-0.12	1.88	.66	.48	769	619.0	81.2	-38.8
41.20	2.96	-0.99	-0.12	1.85	.67	.49	768	618.8	81.2	-38.4
41.40	2.89	-0.98	-0.12	1.80	.68	.50	764	618.5	81.2	-38.0
41.60	2.95	-0.96	-0.12	1.87	.67	.50	767	618.3	81.2	-37.6
41.80	2.95	-0.95	-0.12	1.89	.67	.50	768	618.0	81.2	-37.1
42.00	2.95	-0.93	-0.11	1.91	.65	.47	772	617.8	81.2	-36.7
42.20	3.17	-0.91	-0.11	2.14	.59	.41	789	617.5	81.1	-36.3
42.40	3.22	-0.90	-0.11	2.21	.58	.40	794	617.3	81.1	-35.8
42.60	3.31	-0.88	-0.11	2.32	.56	.39	798	617.0	81.1	-35.4
38143.00	2.98	-0.84	-0.11	2.02	-16.64	-16.48	776	616.5	81.0	-34.4
43.50	2.58	-0.79	-0.11	1.68	.73	.57	750	615.9	80.8	-33.3
44.00	2.50	-0.74	-0.11	1.65	.73	.57	749	615.2	80.7	-32.1
44.50	2.47	-0.68	-0.11	1.68	.72	.57	751	614.6	80.4	-30.8
45.00	2.44	-0.60	-0.11	1.73	.70	.55	756	613.9	80.2	-29.6
45.50	2.58	-0.53	-0.11	1.94	.65	.51	771	613.3	79.9	-28.3
46.00	2.64	-0.45	-0.11	2.08	.62	.48	780	612.6	79.6	-27.0
38146.20	2.67	-0.41	-0.11	2.14	-16.60	-16.46	785	612.4	79.4	-26.5
46.40	2.89	-0.38	-0.11	2.41	.55	.41	799	612.1	79.3	-25.7
46.60	3.03	-0.34	-0.11	2.59	.52	.37	809	611.8	79.1	-25.4
46.80	3.21	-0.30	-0.11	2.80	.48	.34	819	611.6	79.0	-24.9

Table 3 (cont.)

1961 51 (Explorer 9)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38147.00	3.06	-0.26	-0.11	2.69	-16.49	-16.35	815	611.3	78.8	-24.4
47.20	2.81	-0.23	-0.11	2.48	.54	.40	803	611.0	78.7	-23.8
38147.50	2.70	-0.17	-0.11	2.43	-16.55	-16.42	799	610.7	78.4	-23.0
48.00	2.66	-0.06	-0.11	2.49	.54	.41	802	610.0	78.0	-21.7
48.50	2.44	0.03	-0.10	2.36	.56	.43	797	609.3	77.6	-20.3
49.00	2.51	0.03	-0.10	2.44	.54	.42	801	608.7	77.2	-18.9
49.50	2.55	0.03	-0.10	2.48	.53	.41	805	608.0	76.8	-17.6
38149.60	2.49	0.03	-0.10	2.42	-16.54	-16.42	801	607.9	76.7	-17.3
49.80	4.02	0.04	-0.10	3.95	.31	.20	863	607.6	76.5	-16.7
50.00	4.60	0.04	-0.10	4.53	.23	.12	886	607.4	76.3	-16.2
50.20	4.76	0.04	-0.10	4.70	.20	.09	893	607.1	76.1	-15.6
50.40	5.90	0.04	-0.10	5.84	.11	.00	921	606.8	76.0	-15.1
50.60	5.01	0.00	-0.10	4.90	.19	.08	897	606.6	75.8	-14.5
50.80	4.50	-0.05	-0.10	4.35	.25	.14	881	606.3	75.6	-14.0
51.00	4.34	-0.09	-0.10	4.14	.27	.17	873	606.1	75.4	-13.4
51.20	4.14	-0.14	-0.10	3.90	.30	.19	866	605.8	75.2	-12.9
51.40	4.16	-0.18	-0.10	3.88	.30	.19	866	605.5	75.1	-12.3
51.60	4.22	-0.22	-0.10	3.89	.29	.19	867	605.3	74.9	-11.8
51.80	4.24	-0.26	-0.10	3.88	.29	.19	867	605.0	74.7	-11.2
52.00	4.28	-0.29	-0.10	3.88	.29	.20	866	604.7	74.5	-10.7
52.20	4.30	-0.33	-0.10	3.87	.29	.20	866	604.5	74.4	-10.1
52.40	4.21	-0.36	-0.10	3.74	.31	.22	861	604.2	74.2	-9.6
52.60	4.33	-0.40	-0.10	3.83	.31	.21	862	604.0	74.0	-9.0
52.80	4.42	-0.43	-0.10	3.89	.30	.20	865	603.7	73.9	-8.5
53.00	4.48	-0.46	-0.10	3.92	.29	.20	867	603.5	73.7	-7.9
53.20	4.60	-0.49	-0.10	4.01	.28	.19	870	603.2	73.5	-7.4
53.40	4.86	-0.50	-0.10	4.25	.25	.16	878	602.9	73.4	-6.8
53.60	5.10	-0.55	-0.10	4.44	.23	.14	884	602.7	73.2	-6.3
53.80	5.09	-0.57	-0.10	4.42	.23	.15	883	602.4	73.0	-5.7
38154.00	4.94	-0.59	-0.10	4.25	-16.25	-16.17	877	602.2	72.9	-5.2
54.50	4.96	-0.64	-0.10	4.21	.26	.18	875	601.5	72.5	-3.9
55.00	4.86	-0.70	-0.10	4.06	.27	.20	870	600.9	72.2	-2.5
55.50	4.86	-0.74	-0.11	4.01	.27	.20	869	600.3	71.8	-1.2
56.00	4.93	-0.79	-0.11	4.04	.27	.21	869	599.7	71.5	0.1
56.50	5.08	-0.82	-0.11	4.15	.26	.19	873	599.0	71.3	1.4
57.00	5.24	-0.86	-0.11	4.27	.24	.18	878	598.4	71.0	2.6
57.50	5.37	-0.90	-0.11	4.37	.22	.17	882	597.8	70.8	3.8
58.00	5.49	-0.93	-0.11	4.45	.21	.16	886	597.2	70.7	5.0
58.50	5.94	-0.96	-0.11	4.88	.16	.12	898	596.6	70.6	6.2
59.00	6.22	-0.99	-0.11	5.12	.14	.10	905	596.0	70.5	7.4
59.50	6.27	-1.01	-0.11	5.14	.13	.10	906	595.4	70.4	8.5
60.00	6.17	-1.04	-0.11	5.02	.14	.10	904	594.8	70.5	9.5
60.50	6.12	-1.06	-0.11	4.95	.14	.11	903	594.2	70.5	10.6
61.00	6.10	-1.08	-0.11	4.90	.15	.12	900	593.7	70.6	11.6
38161.20	6.09	-1.07	-0.12	4.90	-16.14	-16.12	901	593.4	70.7	11.9
61.40	6.11	-1.10	-0.12	4.89	.15	.13	900	593.2	70.8	12.3
61.60	6.10	-1.11	-0.12	4.87	.15	.13	898	593.0	70.9	12.7
61.80	6.10	-1.12	-0.12	4.86	.15	.13	898	592.8	70.9	13.1
62.00	6.11	-1.13	-0.12	4.86	.15	.13	899	592.5	71.0	13.4
62.20	6.13	-1.14	-0.12	4.88	.14	.13	900	592.3	71.1	13.7
62.40	6.69	-1.14	-0.12	5.43	.09	.07	916	592.1	71.3	14.1
62.60	6.71	-1.15	-0.12	5.44	.08	.07	917	591.9	71.4	14.4
62.80	6.25	-1.16	-0.12	4.97	.12	.11	905	591.7	71.5	14.7
63.00	6.00	-1.17	-0.12	4.72	.15	.14	897	591.4	71.6	15.0

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38163.50	5.88	-1.18	-0.12	4.58	-16.16	-16.15	894	590.9	72.0	15.8
64.00	5.70	-1.20	-0.12	4.38	.18	.18	887	590.4	72.5	16.4
64.50	5.18	-1.21	-0.12	3.85	.24	.24	871	589.8	73.0	17.0
65.00	4.90	-1.23	-0.12	3.55	.27	.28	862	589.3	73.5	17.6
65.50	4.84	-1.24	-0.12	3.47	.28	.29	858	588.8	74.1	18.0
66.00	4.82	-1.26	-0.12	3.44	.29	.30	857	588.3	74.7	18.4
66.50	4.70	-1.27	-0.12	3.31	.30	.31	854	587.8	75.4	18.7
67.00	4.69	-1.28	-0.12	3.29	.29	.31	854	587.3	76.1	19.0
67.50	4.75	-1.29	-0.12	3.34	.29	.31	855	586.8	76.8	19.1
68.00	4.36	-1.30	-0.12	2.94	.35	.37	839	586.3	77.6	19.2
68.50	4.59	-1.31	-0.12	3.16	.32	.35	847	585.8	78.3	19.2
38168.80	5.27	-1.32	-0.12	3.83	-16.23	-16.26	870	585.5	78.8	19.2
69.00	5.68	-1.32	-0.12	4.25	.18	.21	884	585.4	79.1	19.1
69.20	5.53	-1.32	-0.12	4.08	.19	.22	880	585.2	79.4	19.1
69.40	4.87	-1.33	-0.12	3.43	.26	.30	860	585.0	79.7	19.0
69.60	4.80	-1.33	-0.12	3.35	.28	.32	855	584.8	80.0	18.9
69.80	4.74	-1.33	-0.12	3.29	.30	.34	850	584.6	80.3	18.8
70.00	4.70	-1.33	-0.12	3.25	.31	.35	848	584.4	80.6	18.7
70.20	4.65	-1.34	-0.12	3.19	.32	.36	846	584.3	80.9	18.6
70.40	4.61	-1.34	-0.12	3.15	.32	.36	844	584.1	81.2	18.4
38170.50	4.39	-1.34	-0.12	2.93	-16.35	-16.40	835	584.0	81.3	18.4
71.00	3.97	-1.35	-0.12	2.50	.42	.47	817	583.6	82.0	18.0
71.50	3.89	-1.35	-0.12	2.42	.44	.49	812	583.1	82.7	17.5
72.00	3.83	-1.36	-0.12	2.35	.46	.51	807	582.7	83.3	16.9
72.50	3.74	-1.36	-0.12	2.26	.48	.53	803	582.3	83.9	16.3
73.00	3.65	-1.36	-0.13	2.16	.50	.55	798	581.9	84.5	15.5
73.50	3.65	-1.36	-0.13	2.15	.50	.56	797	581.5	85.0	14.8
74.00	3.74	-1.37	-0.13	2.24	.48	.54	801	581.1	85.5	13.9
74.50	3.97	-1.37	-0.13	2.47	.43	.50	812	580.7	85.8	13.0
75.00	4.13	-1.37	-0.13	2.62	.40	.47	819	580.3	86.2	12.0
75.50	4.16	-1.37	-0.13	2.65	.41	.48	818	579.9	86.5	11.0
76.00	4.16	-1.38	-0.14	2.64	.42	.50	815	579.6	86.7	9.9
76.50	4.14	-1.38	-0.14	2.63	.43	.50	813	579.2	86.9	8.8
38176.80	4.07	-1.38	-0.14	2.56	-16.44	-16.52	809	579.0	87.0	8.1
77.00	4.42	-1.38	-0.14	2.91	.38	.46	825	578.8	87.0	7.6
77.20	4.80	-1.37	-0.14	3.29	.32	.40	840	578.7	87.0	7.1
77.40	5.21	-1.37	-0.14	3.70	.26	.34	856	578.6	87.1	6.6
77.60	4.96	-1.37	-0.14	3.45	.29	.37	847	578.4	87.1	6.1
77.80	5.24	-1.37	-0.14	3.72	.27	.35	854	578.3	87.1	5.6
78.00	5.54	-1.37	-0.14	4.03	.24	.32	861	578.1	87.1	5.1
78.20	6.07	-1.37	-0.14	4.56	.18	.26	878	578.0	87.1	4.6
78.40	5.98	-1.37	-0.14	4.46	.18	.26	878	577.9	87.1	4.1
78.60	5.23	-1.37	-0.14	3.71	.26	.35	854	577.7	87.1	3.5
78.80	5.20	-1.37	-0.14	3.68	.28	.37	849	577.6	87.0	3.0
38179.00	5.11	-1.37	-0.15	3.60	-16.29	-16.38	847	577.5	87.0	2.5
79.50	5.01	-1.37	-0.15	3.50	.30	.39	843	577.1	86.9	1.1
80.00	4.91	-1.37	-0.15	3.39	.32	.42	837	576.8	86.7	-0.3
80.50	4.91	-1.37	-0.15	3.39	.33	.42	836	576.5	86.5	-1.7
38181.00	4.94	-1.37	-0.15	3.42	-16.31	-16.41	839	576.2	86.2	-3.2
81.20	5.22	-1.37	-0.15	3.70	.27	.37	849	576.1	86.1	-3.8
81.40	6.02	-1.37	-0.15	4.50	.19	.29	872	576.0	86.0	-4.4
81.60	6.30	-1.37	-0.15	4.78	.16	.26	880	575.8	85.9	-5.0
81.80	5.89	-1.36	-0.15	4.37	.20	.30	869	575.7	85.7	-5.6
82.00	5.58	-1.36	-0.15	4.06	.24	.34	859	575.6	85.6	-6.2
82.20	5.53	-1.36	-0.15	4.01	.25	.35	856	575.5	85.5	-6.8

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38182.50	5.45	-1.36	-0.15	3.93	-16.26	-16.36	854	575.3	85.2	-7.7
83.00	5.43	-1.36	-0.16	3.91	.26	.37	851	575.0	84.9	-9.2
83.50	5.46	-1.36	-0.16	3.94	.27	.38	850	574.7	84.5	-10.7
84.00	5.28	-1.36	-0.16	3.76	.29	.40	843	574.4	84.0	-12.3
84.50	4.68	-1.36	-0.16	3.15	.37	.48	821	574.1	83.6	-13.9
85.00	4.54	-1.36	-0.16	3.02	.39	.51	815	573.9	83.2	-15.4
85.50	4.46	-1.36	-0.16	2.94	.41	.53	809	573.6	82.7	-17.0
86.00	4.14	-1.36	-0.16	2.61	.47	.59	794	573.3	82.2	-18.6
86.50	3.81	-1.37	-0.16	2.28	.52	.64	779	573.0	81.8	-20.2
38187.00	7.06	-1.37	-0.17	5.52	-16.12	-15.95	891	572.8	81.3	-21.8
87.20	9.14	-1.37	-0.17	7.60	-15.96	.80	940	572.7	81.1	-22.5
87.40	8.88	-1.37	-0.17	7.34	.97	.82	935	572.5	80.9	-23.1
87.60	7.96	-1.37	-0.17	6.42	-16.04	.88	913	572.4	80.7	-23.7
87.80	6.93	-1.37	-0.17	5.40	.12	.96	888	572.3	80.5	-24.4
88.00	7.19	-1.37	-0.17	5.65	.10	.94	894	572.2	80.3	-25.0
88.20	7.24	-1.37	-0.17	5.70	.10	.94	894	572.1	80.1	-25.7
88.40	6.70	-1.37	-0.17	5.15	.15	.99	879	572.0	79.9	-26.3
88.60	6.44	-1.38	-0.17	4.90	.17	-16.01	873	571.9	79.7	-26.9
88.80	6.41	-1.38	-0.17	4.87	.17	.01	872	571.8	79.5	-27.6
38189.00	6.25	-1.33	-0.17	4.75	-16.18	-16.02	870	571.7	79.4	-28.2
90.00	5.96	-1.33	-0.17	4.46	.21	.06	861	571.1	78.4	-31.3
91.00	5.84	-1.34	-0.17	4.33	.22	.07	856	570.6	77.6	-34.4
92.00	5.66	-1.34	-0.17	4.14	.24	.09	851	570.0	76.8	-37.5
93.00	5.67	-1.35	-0.17	4.15	.23	.09	851	569.5	76.1	-40.4
94.00	5.78	-1.35	-0.17	4.25	.22	.08	854	568.9	75.6	-43.3
95.00	5.71	-1.36	-0.17	4.18	.22	.09	851	568.3	75.2	-46.0
96.00	5.20	-1.36	-0.17	3.67	.28	.16	832	567.7	75.0	-48.7
97.00	4.93	-1.36	-0.17	3.40	.32	.19	821	567.1	75.0	-51.1
38197.20	4.96	-1.36	-0.17	3.43	-16.31	-16.19	823	566.9	75.0	-51.6
97.40	4.94	-1.36	-0.17	3.41	.31	.19	822	566.8	75.0	-52.1
97.60	4.92	-1.36	-0.17	3.39	.31	.19	821	566.7	75.1	-52.5
97.80	5.55	-1.36	-0.17	4.03	.24	.12	844	566.5	75.1	-53.0
98.00	6.19	-1.35	-0.17	4.66	.17	.05	863	566.4	75.2	-53.4
98.20	6.50	-1.35	-0.17	4.97	.15	.03	870	566.3	75.2	-53.8
98.40	6.14	-1.35	-0.17	4.62	.18	.06	860	566.2	75.3	-54.3
98.60	5.79	-1.35	-0.17	4.27	.20	.09	852	566.0	75.4	-54.7
98.80	5.44	-1.35	-0.17	3.92	.24	.13	841	565.9	75.5	-55.1
99.00	5.59	-1.35	-0.17	4.07	.22	.11	847	565.8	75.6	-55.5
38200.00	5.01	-1.34	-0.17	3.50	-16.29	-16.19	823	565.1	76.2	-57.3
01.00	4.26	-1.34	-0.16	2.76	.40	.30	791	564.4	77.1	-58.9
02.00	3.50	-1.33	-0.16	2.02	.55	.45	748	563.7	78.1	-60.3
03.00	3.13	-1.32	-0.15	1.67	.64	.55	721	562.9	79.4	-61.3
04.00	3.17	-1.31	-0.14	1.71	.63	.54	723	562.2	80.8	-61.9
05.00	3.41	-1.29	-0.14	1.99	.55	.47	744	561.4	82.2	-62.3
38205.50	3.75	-1.28	-0.14	2.34	-16.47	-16.39	766	561.0	83.0	-62.3
06.00	4.15	-1.26	-0.13	2.75	.39	.31	789	560.6	83.8	-62.3
06.50	4.49	-1.25	-0.13	3.11	.33	.26	805	560.2	84.5	-62.1
07.00	4.17	-1.24	-0.13	2.81	.39	.32	789	559.8	85.2	-61.9
07.50	3.86	-1.22	-0.13	2.51	.44	.37	774	559.4	86.0	-61.6
38208.00	3.78	-1.21	-0.12	2.44	-16.45	-16.39	770	559.0	86.6	-61.2
09.00	3.66	-1.19	-0.12	2.35	.47	.42	763	558.1	87.9	-60.2
10.00	3.63	-1.14	-0.12	2.37	.47	.42	763	557.2	89.0	-58.9
11.00	3.71	-1.11	-0.11	2.49	.45	.41	769	556.3	89.9	-57.3
12.00	3.41	-1.07	-0.11	2.23	.51	.47	753	555.4	90.5	-55.4

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38213.00	2.86	-1.02	-0.10	1.73	-16.63	-16.60	721	554.5	91.0	-53.3
38214.00	2.92	-0.96	-0.10	1.86	-16.60	-16.57	730	553.5	91.2	-50.9
14.50	3.42	-0.93	-0.09	2.39	.48	.45	761	553.1	91.2	-49.7
15.00	4.21	-0.89	-0.09	3.22	.33	.31	801	552.6	91.2	-48.4
15.50	4.64	-0.85	-0.09	3.69	.27	.26	817	552.1	91.1	-47.1
16.00	4.58	-0.81	-0.09	3.69	.27	.26	817	551.6	91.0	-45.8
16.50	4.60	-0.75	-0.09	3.77	.26	.25	820	551.1	90.8	-44.4
17.00	4.12	-0.68	-0.09	3.36	.32	.31	803	550.6	90.6	-43.0
17.50	4.22	-0.60	-0.08	3.53	.30	.30	808	550.1	90.4	-41.6
18.00	4.13	-0.51	-0.08	3.54	.30	.30	808	549.5	90.1	-40.1
18.50	4.12	-0.40	-0.08	3.64	.29	.29	811	549.0	89.8	-38.6
19.00	3.98	-0.30	-0.08	3.60	.29	.30	810	548.5	89.5	-37.1
19.50	4.00	-0.20	-0.08	3.72	.27	.29	814	548.0	89.1	-35.5
20.00	4.12	-0.11	-0.08	3.93	.25	.27	819	547.4	88.7	-34.0
20.50	4.22	-0.02	-0.08	4.11	.23	.26	824	546.9	88.3	-32.4
21.00	4.13	0.01	-0.08	4.06	.24	.26	822	546.4	87.9	-30.8
21.50	3.98	0.01	-0.08	3.91	.26	.29	816	545.8	87.4	-29.3
22.00	3.66	0.01	-0.08	3.59	.30	.33	804	545.3	86.9	-27.7
22.50	3.67	0.01	-0.08	3.60	.30	.34	803	544.8	86.5	-26.0
23.00	3.48	0.01	-0.08	3.41	.32	.37	797	544.2	86.0	-24.4
23.50	3.73	0.01	-0.08	3.66	.29	.34	805	543.7	85.5	-22.8
24.00	3.82	0.01	-0.08	3.75	.28	.33	807	543.1	85.0	-21.2
24.50	3.83	0.01	-0.08	3.76	.27	.33	808	542.6	84.5	-19.6
25.00	3.74	0.01	-0.08	3.67	.28	.34	805	542.0	84.1	-17.9
25.50	3.96	0.01	-0.08	3.89	.25	.32	811	541.5	83.6	-16.3
26.00	4.21	0.01	-0.08	4.14	.22	.29	820	540.9	83.1	-14.7
26.50	4.98	0.01	-0.08	4.91	.14	.22	840	540.4	82.7	-13.1
27.00	6.12	0.00	-0.08	6.04	.05	.13	867	539.8	82.3	-11.5
27.50	7.46	-0.01	-0.08	7.37	-15.95	.03	896	539.3	81.9	-9.9
28.00	7.27	-0.02	-0.08	7.16	.96	.05	891	538.8	81.5	-8.3
28.50	6.88	-0.04	-0.09	6.76	.99	.08	882	538.2	81.1	-6.8
29.00	6.42	-0.09	-0.09	6.25	-16.02	.12	871	537.7	80.8	-5.2
29.50	5.70	-0.21	-0.09	5.40	.08	.19	851	537.1	80.4	-3.7
30.00	5.29	-0.42	-0.09	4.78	.14	.25	835	536.6	80.2	-2.2
30.50	4.64	-0.61	-0.09	3.94	.22	.33	812	536.1	79.9	-0.7
31.00	4.94	-0.73	-0.10	4.11	.19	.31	818	535.5	79.7	0.8
31.50	7.51	-0.81	-0.10	6.60	-15.97	.09	880	535.0	79.6	2.2
32.00	7.67	-0.87	-0.10	6.70	.96	.08	882	534.5	79.5	3.6
32.50	6.97	-0.92	-0.10	5.95	-16.01	.14	865	533.9	79.4	5.0
33.00	6.85	-0.96	-0.11	5.78	.02	.15	861	533.4	79.4	6.3
33.50	7.09	-1.00	-0.11	5.98	.01	.14	865	532.9	79.4	7.6
34.00	7.78	-1.04	-0.11	6.63	-15.95	.09	880	532.4	79.5	8.9
34.50	7.78	-1.07	-0.11	6.60	.95	.09	880	531.9	79.6	10.1
35.00	7.50	-1.10	-0.12	6.28	.97	.12	872	531.4	79.8	11.2
35.50	7.03	-1.13	-0.12	5.78	-16.01	.16	860	530.9	80.1	12.3
36.00	6.54	-1.16	-0.12	5.26	.05	.20	847	530.4	80.4	13.4
36.50	6.49	-1.19	-0.12	5.18	.06	.21	845	529.9	80.8	14.4
37.00	6.23	-1.21	-0.13	4.90	.07	.23	838	529.4	81.2	15.3
37.50	6.26	-1.23	-0.13	4.90	.07	.24	838	528.9	81.7	16.2
38.00	6.29	-1.25	-0.13	4.91	.07	.24	837	528.4	82.2	17.0
38.50	6.27	-1.27	-0.13	4.87	.08	.25	834	527.9	82.8	17.7
39.00	5.64	-1.29	-0.13	4.22	.15	.33	814	527.5	83.4	18.4
39.50	4.83	-1.30	-0.13	3.40	.24	.43	788	527.0	84.1	19.0
40.00	6.85	-1.32	-0.14	5.39	.03	.22	844	526.5	84.8	19.5
40.50	9.17	-1.33	-0.14	7.71	-15.87	.05	893	526.0	85.5	19.9
41.00	10.06	-1.34	-0.14	8.58	.81	.00	908	525.6	86.3	20.2
41.50	9.20	-1.35	-0.14	7.71	.86	.05	892	525.1	87.1	20.5
42.00	8.83	-1.36	-0.14	7.33	.88	.08	884	524.7	87.8	20.7
42.50	8.83	-1.37	-0.14	7.32	.88	.08	883	524.2	88.6	20.7

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38243.00	8.60	-1.38	-0.14	7.08	-15.90	-16.10	877	523.8	89.4	20.8
43.50	8.18	-1.39	-0.14	6.65	.93	.13	867	523.4	90.2	20.7
44.00	7.86	-1.39	-0.14	6.33	.95	.16	859	522.9	90.9	20.5
44.50	7.88	-1.39	-0.14	6.35	.95	.17	857	522.5	91.6	20.3
38245.00	7.91	-1.40	-0.14	6.38	-15.95	-15.78	855	522.1	92.3	19.9
46.00	8.15	-1.41	-0.14	6.61	.94	.77	857	521.2	93.5	19.1
47.00	7.87	-1.41	-0.14	6.32	.96	.80	848	520.4	94.5	17.9
48.00	7.51	-1.41	-0.14	5.96	.99	.83	837	519.6	95.4	16.5
49.00	6.99	-1.41	-0.14	5.44	-16.03	.88	822	518.8	96.0	14.8
50.00	6.72	-1.41	-0.14	5.17	.06	.91	811	518.0	96.3	13.0
51.00	6.61	-1.40	-0.15	5.06	.08	.93	805	517.2	96.5	10.9
52.00	6.33	-1.39	-0.15	4.79	.11	.97	795	516.5	96.5	8.7
53.00	6.15	-1.38	-0.15	4.61	.13	-16.00	786	515.7	96.3	6.3
54.00	5.92	-1.38	-0.15	4.39	.16	.03	777	515.0	95.9	3.9
55.00	5.88	-1.37	-0.15	4.36	.16	.04	773	514.2	95.4	1.3
56.00	5.95	-1.36	-0.15	4.43	.15	.04	773	513.5	94.7	-1.4
57.00	6.42	-1.35	-0.16	4.91	.11	.00	783	512.8	94.0	-4.1
58.00	7.39	-1.35	-0.16	5.89	.02	-15.92	803	512.1	93.2	-6.8
38258.20	7.65	-1.35	-0.16	6.15	-16.00	-15.90	808	512.0	93.0	-7.4
58.40	7.83	-1.34	-0.16	6.33	-15.99	.89	811	511.8	92.8	-7.9
58.60	7.84	-1.34	-0.16	6.34	.99	.89	810	511.7	92.7	-8.5
58.80	8.35	-1.34	-0.16	6.85	.95	.86	819	511.5	92.5	-9.0
59.00	8.86	-1.34	-0.16	7.36	.92	.82	830	511.4	92.3	-9.6
59.20	9.53	-1.34	-0.16	8.03	.87	.78	842	511.3	92.2	-10.1
59.40	10.05	-1.34	-0.16	8.55	.85	.76	850	511.1	92.0	-10.7
59.60	10.73	-1.34	-0.16	9.23	.81	.72	861	511.0	91.8	-11.3
59.80	10.59	-1.34	-0.16	9.09	.81	.73	860	510.9	91.6	-11.8
60.00	10.62	-1.34	-0.16	9.12	.81	.73	859	510.7	91.5	-12.4
60.20	10.49	-1.34	-0.16	8.99	.82	.74	855	510.6	91.3	-12.9
60.40	10.03	-1.34	-0.16	8.53	.85	.76	847	510.4	91.1	-13.5
60.60	10.38	-1.34	-0.16	8.88	.84	.75	850	510.3	90.9	-14.1
60.80	11.06	-1.34	-0.16	9.56	.80	.72	860	510.2	90.7	-14.6
61.00	12.22	-1.34	-0.16	10.72	.74	.66	879	510.0	90.6	-15.2
61.20	16.48	-1.34	-0.16	14.98	.58	.51	931	509.9	90.4	-15.7
61.40	16.82	-1.34	-0.17	15.32	.57	.50	935	509.7	90.2	-16.3
61.60	16.19	-1.34	-0.17	14.69	.59	.52	926	509.6	90.0	-16.9
61.80	14.90	-1.34	-0.17	13.40	.64	.56	910	509.5	89.9	-17.4
62.00	12.63	-1.33	-0.17	11.13	.72	.65	882	509.3	89.7	-18.0
62.20	12.47	-1.33	-0.17	10.96	.73	.66	879	509.2	89.5	-18.5
62.40	12.46	-1.33	-0.17	10.96	.72	.65	879	509.1	89.4	-19.1
62.60	12.29	-1.34	-0.17	10.78	.73	.66	877	508.9	89.2	-19.6
62.80	11.78	-1.34	-0.17	10.27	.75	.68	869	508.8	89.1	-20.2
38263.00	11.29	-1.34	-0.17	9.78	-15.78	-15.71	860	508.6	88.9	-20.7
63.50	11.12	-1.34	-0.17	9.61	.79	.72	855	508.3	88.5	-22.1
64.00	12.08	-1.34	-0.17	10.56	.74	.68	868	507.9	88.1	-23.4
64.50	13.19	-1.34	-0.17	11.67	.70	.64	882	507.6	87.8	-24.8
65.00	12.86	-1.35	-0.17	11.34	.71	.65	877	507.2	87.5	-26.1
65.50	11.91	-1.35	-0.18	10.38	.75	.69	862	506.9	87.2	-27.4
66.00	11.82	-1.36	-0.18	10.28	.75	.70	860	506.5	86.9	-28.7
66.50	11.65	-1.36	-0.18	10.11	.76	.71	856	506.2	86.7	-29.9
67.00	11.48	-1.37	-0.18	9.93	.76	.72	853	505.8	86.5	-31.2
67.50	11.47	-1.37	-0.18	9.91	.76	.72	852	505.5	86.4	-32.4
68.00	11.32	-1.38	-0.18	9.76	.77	.73	848	505.1	86.3	-33.6
68.50	11.52	-1.38	-0.18	9.96	.76	.72	850	504.7	86.2	-34.7
69.00	11.51	-1.38	-0.18	9.94	.75	.72	850	504.4	86.2	-35.8
69.50	11.82	-1.39	-0.18	10.25	.73	.70	855	504.0	86.3	-36.9
70.00	12.18	-1.39	-0.19	10.60	.72	.69	858	503.6	86.4	-37.9

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38270.50	11.40	-1.39	-0.19	9.82	-15.75	-15.72	846	503.3	86.5	-38.9
71.00	10.53	-1.39	-0.19	8.94	.79	.77	832	502.9	86.8	-39.8
71.50	9.71	-1.40	-0.19	8.12	.83	.81	817	502.5	87.0	-40.7
72.00	9.43	-1.40	-0.19	7.85	.84	.83	813	502.1	87.4	-41.5
72.50	9.34	-1.40	-0.19	7.75	.85	.83	811	501.7	87.7	-42.2
73.00	9.52	-1.40	-0.19	7.93	.83	.82	813	501.3	88.2	-42.9
73.50	9.20	-1.40	-0.19	7.61	.85	.84	807	500.9	88.7	-43.6
74.00	8.74	-1.40	-0.19	7.15	.88	.87	797	500.5	89.3	-44.1
74.50	8.42	-1.40	-0.19	6.82	.91	.91	787	500.1	89.9	-44.6
75.00	8.13	-1.40	-0.19	6.54	.92	.92	782	499.7	90.5	-45.0
75.50	8.25	-1.40	-0.19	6.66	.91	.91	785	499.3	91.3	-45.3
76.00	8.20	-1.40	-0.19	6.61	.91	.92	782	498.9	92.0	-45.6
76.50	8.12	-1.40	-0.19	6.53	.92	.93	778	498.5	92.8	-45.8
77.00	8.09	-1.40	-0.19	6.50	.92	.94	776	498.0	93.6	-45.8
77.50	8.10	-1.40	-0.19	6.51	.91	.93	776	497.6	94.4	-45.8
78.00	8.24	-1.40	-0.18	6.66	.90	.92	778	497.2	95.3	-45.7
78.50	8.06	-1.39	-0.18	6.48	.91	.94	773	496.7	96.1	-45.5
79.00	8.00	-1.39	-0.18	6.43	.92	.95	770	496.3	97.0	-45.3
79.50	7.83	-1.39	-0.18	6.25	.94	.97	764	495.8	97.8	-44.9
80.00	8.36	-1.39	-0.18	6.79	.90	.93	773	495.4	98.6	-44.5
80.50	9.01	-1.38	-0.18	7.45	.85	.89	785	494.9	99.4	-43.9
81.00	9.30	-1.38	-0.18	7.74	.83	.88	788	494.4	100.2	-43.3
81.50	9.18	-1.37	-0.17	7.64	.84	.89	784	494.0	100.9	-42.6
82.00	8.99	-1.37	-0.17	7.45	.85	.90	778	493.5	101.6	-41.8
82.50	8.85	-1.36	-0.17	7.32	.86	.92	774	493.0	102.2	-41.0
83.00	8.79	-1.35	-0.17	7.27	.86	.92	772	492.5	102.7	-40.0
83.50	9.21	-1.35	-0.17	7.69	.84	.90	777	492.0	103.3	-39.0
84.00	9.76	-1.34	-0.17	8.26	.80	.87	784	491.5	103.7	-38.0
84.50	10.17	-1.33	-0.17	8.68	.79	.69	787	491.1	104.1	-36.8
85.00	9.90	-1.32	-0.17	8.41	.81	.72	779	490.5	104.5	-35.6
38285.20	9.54	-1.32	-0.16	8.05	-15.83	-15.74	772	490.3	104.6	-35.1
85.40	9.24	-1.32	-0.16	7.76	.85	.76	766	490.1	104.7	-34.6
85.60	8.95	-1.32	-0.16	7.47	.87	.78	760	489.9	104.8	-34.1
85.80	8.49	-1.31	-0.16	7.02	.90	.81	752	489.7	104.9	-33.6
86.00	9.34	-1.31	-0.16	7.86	.84	.76	767	489.5	105.0	-33.1
86.20	12.93	-1.31	-0.16	11.46	.67	.59	815	489.3	105.0	-32.6
86.40	16.21	-1.30	-0.16	14.74	.55	.48	849	489.1	105.1	-32.0
86.60	23.70	-1.30	-0.16	22.24	.37	.30	911	488.9	105.2	-31.5
86.80	21.33	-1.30	-0.16	19.87	.42	.35	893	488.7	105.2	-30.9
87.00	19.78	-1.30	-0.16	18.32	.46	.39	879	488.5	105.2	-30.3
87.20	16.78	-1.30	-0.16	15.33	.54	.47	851	488.3	105.3	-29.8
87.40	16.54	-1.29	-0.16	15.09	.55	.48	847	488.1	105.3	-29.2
87.60	16.79	-1.29	-0.16	15.35	.54	.48	848	487.9	105.3	-28.6
87.80	16.90	-1.28	-0.16	15.45	.54	.48	849	487.7	105.3	-28.0
88.00	16.52	-1.28	-0.16	15.09	.55	.49	845	487.5	105.3	-27.4
88.20	16.65	-1.28	-0.16	15.21	.54	.49	844	487.3	105.3	-26.8
88.40	16.78	-1.28	-0.16	15.35	.54	.49	844	487.0	105.3	-26.2
88.60	16.77	-1.27	-0.16	15.34	.54	.49	843	486.8	105.2	-25.6
88.80	16.76	-1.27	-0.15	15.33	.54	.49	842	486.6	105.2	-25.0
89.00	17.73	-1.27	-0.15	16.31	.52	.47	849	486.4	105.2	-24.4
89.20	18.40	-1.27	-0.15	16.98	.50	.45	854	486.2	105.1	-23.7
89.40	20.36	-1.26	-0.15	18.94	.45	.41	869	486.0	105.1	-23.1
89.60	20.40	-1.26	-0.15	18.98	.45	.41	868	485.8	105.0	-22.5
89.80	19.96	-1.26	-0.15	18.55	.46	.42	863	485.6	104.9	-21.8
90.00	18.73	-1.26	-0.15	17.32	.50	.45	852	485.3	104.9	-21.2
90.20	17.82	-1.25	-0.15	16.42	.52	.48	843	485.1	104.8	-20.5
90.40	16.28	-1.25	-0.15	14.88	.57	.53	827	484.9	104.7	-19.9
90.60	15.07	-1.25	-0.15	13.68	.61	.57	814	484.7	104.6	-19.2
90.80	15.00	-1.25	-0.15	13.61	.61	.57	813	484.5	104.5	-18.5

Table 3 (cont.)

REPRODUCIBILITY OF
ORIGINAL PAGE IS POOR

1961 51 (Explorer 9)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38291.00	1.67	-0.12	-0.01	1.53	-15.56	-15.52	827	484.3	104.4	-17.9
91.50	1.96	-0.12	-0.01	1.82	.48	.45	849	483.7	104.1	-16.2
92.00	2.05	-0.12	-0.01	1.91	.47	.44	853	483.2	103.8	-14.5
92.50	2.02	-0.12	-0.01	1.88	.48	.46	847	482.7	103.5	-12.8
93.00	2.09	-0.12	-0.01	1.95	.46	.45	849	482.1	103.1	-11.0
38293.20	2.16	-0.12	-0.01	2.02	-15.45	-15.43	853	481.9	103.0	-10.3
93.40	2.25	-0.12	-0.01	2.11	.43	.42	858	481.7	102.8	-9.7
93.60	2.42	-0.12	-0.01	2.28	.40	.39	868	481.5	102.7	-9.0
93.80	2.59	-0.12	-0.01	2.45	.36	.35	879	481.3	102.5	-8.3
94.00	2.94	-0.12	-0.01	2.81	.30	.29	900	481.0	102.4	-7.6
94.20	3.38	-0.12	-0.01	3.25	.24	.23	922	480.8	102.2	-6.8
94.40	3.71	-0.12	-0.01	3.57	.20	.19	937	480.6	102.0	-6.1
94.60	3.59	-0.12	-0.01	3.46	.21	.21	931	480.4	101.9	-5.4
94.80	3.56	-0.12	-0.01	3.42	.22	.22	926	480.2	101.7	-4.7
95.00	3.60	-0.12	-0.01	3.46	.21	.21	927	480.0	101.6	-4.0
95.20	4.62	-0.12	-0.01	4.49	.09	.10	975	479.7	101.4	-3.3
95.40	6.61	-0.12	-0.01	6.47	-14.94	-14.94	1046	479.5	101.2	-2.6
95.60	4.60	-0.12	-0.01	4.46	-15.11	-15.11	968	479.3	101.0	-1.9
95.80	2.81	-0.12	-0.01	2.67	.33	.34	879	479.1	100.9	-1.2
96.00	1.77	-0.12	-0.01	1.64	.55	.56	809	478.9	100.7	-0.5
96.20	1.76	-0.12	-0.01	1.63	.56	.57	806	478.7	100.5	0.2
96.40	1.97	-0.12	-0.01	1.84	.51	.52	820	478.5	100.4	0.9
96.60	2.12	-0.12	-0.01	1.98	.47	.49	830	478.2	100.2	1.7
96.80	2.30	-0.12	-0.01	2.17	.43	.45	842	478.0	100.0	2.4
38297.00	2.42	-0.12	-0.01	2.29	-15.40	-15.42	850	477.8	99.8	3.1
97.50	2.47	-0.12	-0.01	2.33	.39	.41	851	477.3	99.4	4.8
98.00	2.34	-0.12	-0.01	2.21	.41	.36	842	476.8	99.0	6.6
98.50	2.03	-0.12	-0.01	1.89	.49	.44	818	476.2	98.6	8.4
99.00	1.94	-0.12	-0.01	1.81	.51	.46	810	475.7	98.2	10.1
99.50	1.90	-0.12	-0.01	1.76	.52	.48	803	475.2	97.8	11.9
38300.00	2.19	-0.13	-0.01	2.05	.45	.41	823	474.7	97.5	13.6
00.50	2.41	-0.13	-0.01	2.27	.40	.37	835	474.1	97.1	15.3
01.00	2.22	-0.13	-0.01	2.08	.44	.41	821	473.6	96.8	17.0
01.50	2.04	-0.13	-0.01	1.90	.48	.46	806	473.1	96.5	18.7
02.00	1.92	-0.13	-0.01	1.77	.52	.49	795	472.6	96.3	20.3
02.50	1.73	-0.13	-0.01	1.58	.57	.55	779	472.1	96.1	22.0
03.00	1.52	-0.13	-0.01	1.37	.63	.62	759	471.6	95.9	23.6
03.50	1.40	-0.13	-0.01	1.26	.67	.66	747	471.1	95.8	25.2
04.00	1.29	-0.13	-0.01	1.14	.72	.71	733	470.6	95.7	26.7
04.50	1.20	-0.13	-0.01	1.06	.75	.75	724	470.1	95.6	28.2
05.00	1.21	-0.13	-0.01	1.06	.74	.75	724	469.6	95.6	29.7
05.50	1.30	-0.13	-0.01	1.15	.70	.71	733	469.2	95.7	31.1
06.00	1.36	-0.14	-0.01	1.21	.67	.69	738	468.7	95.8	32.5
06.50	1.45	-0.14	-0.01	1.30	.64	.65	746	468.2	96.0	33.8
07.00	1.50	-0.14	-0.01	1.35	.62	.64	749	467.7	96.2	35.1
07.50	1.56	-0.14	-0.01	1.40	.60	.62	753	467.3	96.5	36.4
08.00	1.59	-0.14	-0.01	1.44	.58	.61	756	466.8	96.8	37.5
08.50	1.59	-0.14	-0.01	1.44	.58	.61	754	466.4	97.2	38.7
09.00	1.60	-0.14	-0.01	1.44	.58	.62	753	465.9	97.7	39.7
09.50	1.74	-0.14	-0.01	1.59	.53	.57	765	465.5	98.2	40.7
10.00	1.99	-0.14	-0.01	1.84	.46	.50	784	465.0	98.7	41.6
10.50	2.25	-0.14	-0.01	2.10	.40	.44	801	464.6	99.4	42.5
11.00	2.32	-0.14	-0.01	2.16	.39	.35	802	464.1	100.0	43.2
11.50	2.06	-0.14	-0.01	1.91	.44	.41	784	463.7	100.7	43.9
12.00	2.01	-0.14	-0.01	1.85	.45	.43	779	463.3	101.5	44.5
12.50	2.23	-0.14	-0.01	2.08	.40	.38	793	462.8	102.3	45.0
13.00	2.52	-0.14	-0.01	2.37	.34	.32	809	462.4	103.1	45.4
13.50	2.80	-0.14	-0.01	2.64	.29	.28	823	462.0	103.9	45.7

Table 3 (cont.)

1961 81 (Explorer 9)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38314.00	3.10	-0.14	-0.01	2.95	-15.24	-15.23	838	461.6	104.7	46.0
14.50	3.43	-0.14	-0.01	3.27	.20	.19	851	461.2	105.6	46.1
15.00	3.48	-0.14	-0.01	3.33	.19	.19	852	460.8	106.4	46.2
15.50	3.40	-0.14	-0.01	3.25	.21	.20	846	460.4	107.2	46.2
16.00	3.30	-0.14	-0.01	3.15	.22	.22	839	460.0	108.0	46.0
16.50	3.30	-0.13	-0.01	3.16	.22	.22	838	459.6	108.7	45.8
17.00	3.28	-0.13	-0.01	3.13	.23	.24	834	459.2	109.5	45.5
17.50	3.23	-0.13	-0.01	3.09	.24	.25	829	458.8	110.1	45.2
18.00	3.17	-0.13	-0.01	3.03	.25	.26	825	458.4	110.8	44.7
18.50	3.03	-0.13	-0.01	2.89	.27	.29	816	458.1	111.3	44.2
19.00	2.87	-0.13	-0.01	2.73	.30	.32	806	457.7	111.8	43.6
19.50	2.68	-0.13	-0.01	2.54	.34	.36	793	457.3	112.3	42.9
20.00	2.67	-0.13	-0.01	2.53	.34	.37	790	456.9	112.7	42.2
20.50	2.74	-0.13	-0.01	2.60	.33	.36	792	456.6	113.0	41.4
21.00	2.86	-0.12	-0.01	2.72	.32	.35	797	456.2	113.3	40.5
21.50	2.94	-0.12	-0.01	2.80	.30	.34	799	455.9	113.5	39.6
22.00	3.00	-0.12	-0.01	2.87	.29	.33	801	455.5	113.7	38.6
22.50	3.06	-0.12	-0.01	2.93	.28	.32	804	455.2	113.8	37.6
23.00	3.15	-0.12	-0.01	3.02	.26	.31	808	454.8	113.8	36.5
23.50	3.09	-0.12	-0.01	2.97	.27	.32	804	454.5	113.8	35.4
24.00	2.87	-0.12	-0.01	2.75	.31	.36	791	454.2	113.8	34.3
24.50	2.52	-0.11	-0.01	2.39	.38	.43	771	453.8	113.7	33.1
25.00	2.32	-0.11	-0.01	2.20	.41	.47	760	453.5	113.5	31.9
38325.20	2.50	-0.11	-0.01	2.38	-15.38	-15.44	769	453.4	113.4	31.4
25.40	2.46	-0.11	-0.01	2.33	.39	.45	766	453.2	113.3	30.9
25.60	2.42	-0.11	-0.01	2.30	.39	.45	764	453.1	113.2	30.3
25.80	2.29	-0.11	-0.01	2.16	.42	.48	757	453.0	113.2	29.8
26.00	2.73	-0.11	-0.01	2.61	.33	.31	781	452.8	113.0	29.3
26.20	4.20	-0.11	-0.01	4.08	.13	.11	846	452.7	112.9	28.8
26.40	6.14	-0.11	-0.01	6.02	-14.96	-14.94	911	452.6	112.8	28.3
26.60	6.07	-0.11	-0.01	5.95	.96	.94	909	452.5	112.7	27.8
26.80	6.02	-0.11	-0.01	5.90	.96	.95	907	452.3	112.6	27.2
27.00	4.34	-0.11	-0.01	4.22	-15.11	-15.10	850	452.2	112.5	26.7
27.20	4.10	-0.11	-0.01	3.99	.14	.12	841	452.1	112.3	26.2
27.40	3.27	-0.11	-0.01	3.15	.24	.22	807	451.9	112.2	25.6
27.60	2.63	-0.10	-0.01	2.51	.34	.33	775	451.8	112.1	25.1
27.80	2.84	-0.10	-0.01	2.72	.31	.30	784	451.7	111.9	24.5
38328.00	2.50	-0.10	-0.01	2.39	-15.37	-15.35	768	451.6	111.8	24.0
28.50	2.37	-0.10	-0.01	2.26	.39	.38	760	451.3	111.4	22.6
29.00	2.27	-0.10	-0.01	2.16	.41	.40	753	450.9	111.0	21.2
29.50	2.25	-0.10	-0.01	2.14	.42	.41	751	450.6	110.5	19.7
30.00	2.15	-0.10	-0.01	2.04	.44	.44	744	450.3	110.1	18.3
30.50	2.22	-0.10	-0.01	2.11	.43	.43	747	450.0	109.6	16.9
31.00	2.40	-0.10	-0.01	2.30	.38	.39	758	449.7	109.2	15.4
38331.20	2.81	-0.09	-0.01	2.71	-15.31	-15.31	780	449.6	109.0	14.9
31.40	3.14	-0.09	-0.01	3.04	.26	.26	795	449.4	108.8	14.3
31.60	3.28	-0.09	-0.01	3.18	.24	.25	800	449.3	108.6	13.7
31.80	3.69	-0.09	-0.01	3.59	.18	.19	819	449.2	108.4	13.1
32.00	10.00	-0.09	-0.01	9.89	-14.73	-14.74	997	449.1	108.3	12.5
32.20	6.75	-0.09	-0.01	6.65	.90	.91	921	449.0	108.1	11.9
32.40	6.37	-0.09	-0.01	6.27	.93	.94	909	448.8	107.9	11.4
32.60	5.49	-0.09	-0.01	5.38	-15.00	-15.01	881	448.7	107.7	10.8
32.80	4.82	-0.09	-0.01	4.72	.07	.08	858	448.6	107.5	10.2
33.00	2.89	-0.09	-0.01	2.79	.30	.31	781	448.5	107.3	9.6
33.20	3.20	-0.09	-0.01	3.10	.25	.26	795	448.3	107.2	9.0
33.40	2.47	-0.09	-0.01	2.37	.37	.38	760	448.2	107.0	8.5
33.60	2.46	-0.09	-0.01	2.36	.36	.38	760	448.1	106.8	7.9

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^5 \dot{p}$	$10^5 \dot{p}_s$	$10^5 \dot{p}_t$	$-10^5 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38333.80	2.51	-0.09	-0.01	2.41	-15.35	-15.37	763	448.0	106.6	7.3
38334.00	2.52	-0.09	-0.01	2.42	-15.35	-15.37	763	447.8	106.4	6.7
34.50	2.72	-0.09	-0.01	2.62	.32	.34	774	447.5	106.0	5.3
35.00	2.91	-0.09	-0.01	2.81	.28	.30	784	447.2	105.6	3.9
35.50	3.08	-0.09	-0.01	2.98	.25	.28	792	446.9	105.2	2.4
36.00	3.34	-0.09	-0.01	3.25	.21	.23	805	446.6	104.9	1.0
36.50	3.25	-0.09	-0.01	3.15	.22	.25	801	446.2	104.5	-0.3
37.00	3.10	-0.09	-0.01	3.00	.24	.27	795	445.9	104.2	-1.7
37.50	2.98	-0.09	-0.01	2.88	.25	.29	789	445.6	104.0	-3.1
38.00	2.95	-0.09	-0.01	2.86	.25	.29	788	445.3	103.7	-4.4
38.50	2.95	-0.09	-0.01	2.85	.25	.30	788	444.9	103.5	-5.7
39.00	3.05	-0.09	-0.01	2.95	.23	.28	793	444.6	103.4	-6.9
39.50	3.33	-0.09	-0.01	3.23	.19	.24	807	444.3	103.3	-8.2
40.00	3.66	-0.10	-0.01	3.56	.14	.19	823	443.9	103.3	-9.4
38340.20	3.77	-0.10	-0.01	3.66	-15.12	-15.17	827	443.8	103.3	-9.8
40.40	3.91	-0.10	-0.01	3.80	.11	.16	833	443.6	103.3	-10.3
40.60	4.30	-0.10	-0.01	4.19	.06	.11	848	443.5	103.3	-10.8
40.80	4.80	-0.10	-0.01	4.69	.01	.06	866	443.4	103.3	-11.2
41.00	5.14	-0.10	-0.01	5.03	-14.98	-14.96	877	443.2	103.4	-11.6
41.20	5.09	-0.10	-0.01	4.98	.98	.96	875	443.1	103.4	-12.1
41.40	5.03	-0.10	-0.01	4.92	.99	.97	873	442.9	103.4	-12.5
41.60	4.60	-0.11	-0.01	4.48	-15.03	-15.01	858	442.8	103.5	-12.9
41.80	4.60	-0.11	-0.01	4.48	.03	.01	858	442.6	103.6	-13.3
42.00	4.49	-0.11	-0.01	4.38	.04	.02	854	442.5	103.7	-13.7
42.20	4.30	-0.11	-0.01	4.18	.06	.04	847	442.3	103.8	-14.1
42.40	4.09	-0.11	-0.01	3.97	.08	.06	839	442.2	103.9	-14.5
42.60	4.26	-0.11	-0.01	4.14	.06	.05	845	442.1	104.0	-14.9
42.80	4.59	-0.11	-0.01	4.46	.03	.01	856	441.9	104.1	-15.2
43.00	4.75	-0.11	-0.01	4.62	.01	.00	862	441.8	104.2	-15.6
43.20	4.54	-0.11	-0.01	4.41	.03	.02	855	441.6	104.4	-15.9
43.40	4.26	-0.12	-0.01	4.13	.06	.05	845	441.5	104.5	-16.3
43.60	4.11	-0.12	-0.01	3.98	.08	.06	839	441.3	104.7	-16.6
43.80	4.07	-0.12	-0.01	3.94	.08	.07	837	441.2	104.9	-16.9
38344.00	3.97	-0.12	-0.01	3.84	-15.09	-15.08	833	441.0	105.1	-17.2
44.50	3.83	-0.12	-0.01	3.69	.11	.10	827	440.6	105.6	-17.9
45.00	3.72	-0.12	-0.01	3.59	.12	.11	822	440.2	106.1	-18.5
45.50	3.62	-0.13	-0.01	3.49	.13	.13	818	439.8	106.8	-19.1
46.00	3.48	-0.13	-0.01	3.34	.14	.15	812	439.4	107.4	-19.5
46.50	3.33	-0.13	-0.01	3.19	.16	.17	804	439.0	108.2	-19.9
47.00	3.22	-0.13	-0.01	3.08	.18	.19	799	438.6	108.9	-20.2
47.50	3.16	-0.13	-0.01	3.01	.19	.20	795	438.2	109.7	-20.4
48.00	3.16	-0.13	-0.01	3.01	.19	.21	795	437.8	110.6	-20.5
48.50	3.29	-0.13	-0.01	3.14	.17	.19	800	437.3	111.4	-20.5
49.00	3.29	-0.13	-0.01	3.14	.16	.19	800	436.9	112.3	-20.5
38349.20	3.24	-0.14	-0.01	3.09	-15.17	-15.20	797	436.7	112.6	-20.4
49.40	3.17	-0.14	-0.01	3.03	.18	.21	795	436.6	112.9	-20.3
49.60	2.95	-0.14	-0.01	2.80	.21	.25	784	436.4	113.3	-20.2
49.80	2.95	-0.14	-0.01	2.80	.21	.25	783	436.2	113.6	-20.1
50.00	3.01	-0.14	-0.01	2.86	.20	.24	786	436.0	113.9	-20.0
50.20	3.20	-0.14	-0.01	3.05	.18	.21	794	435.8	114.3	-19.9
50.40	3.33	-0.14	-0.01	3.18	.16	.20	800	435.7	114.6	-19.7
50.60	3.92	-0.14	-0.01	3.77	.08	.12	825	435.5	114.9	-19.5
50.80	4.92	-0.14	-0.01	4.77	-14.98	.01	862	435.3	115.2	-19.4
51.00	4.96	-0.14	-0.01	4.81	.97	.01	864	435.1	115.6	-19.2
51.20	4.45	-0.14	-0.01	4.30	-15.02	.07	844	434.9	115.9	-19.0
51.40	4.40	-0.14	-0.01	4.25	.03	.08	840	434.7	116.2	-18.7

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38351.60	3.67	-0.14	-0.01	3.52	-15.11	-15.16	811	434.6	116.5	-18.5
51.80	3.54	-0.14	-0.01	3.38	.13	.18	805	434.4	116.8	-18.2
52.00	3.40	-0.14	-0.01	3.25	.15	.20	800	434.2	117.0	-18.0
38352.50	3.47	-0.14	-0.01	3.32	-15.14	-15.20	801	433.7	117.7	-17.2
53.00	3.36	-0.14	-0.01	3.21	.16	.22	796	433.2	118.3	-16.4
53.50	3.34	-0.14	-0.01	3.19	.16	.22	794	432.8	118.9	-15.5
54.00	3.33	-0.14	-0.01	3.18	.16	.24	791	432.3	119.4	-14.5
54.50	3.26	-0.14	-0.01	3.10	.18	.25	785	431.8	119.8	-13.5
55.00	3.25	-0.14	-0.01	3.10	.18	.26	783	431.3	120.1	-12.4
55.50	3.43	-0.14	-0.02	3.28	.16	.24	790	430.8	120.4	-11.2
56.00	3.73	-0.14	-0.02	3.58	.12	.21	801	430.3	120.7	-10.0
56.50	3.89	-0.14	-0.02	3.74	.11	.02	805	429.8	120.8	-8.7
57.00	3.90	-0.14	-0.02	3.75	.11	.03	802	429.3	120.9	-7.3
38357.20	3.95	-0.14	-0.02	3.80	-15.11	-15.03	803	429.1	120.9	-6.8
57.40	4.03	-0.14	-0.02	3.88	.10	.02	806	428.9	120.9	-6.2
57.60	4.29	-0.14	-0.02	4.14	.07	.00	815	428.7	120.9	-5.7
57.80	4.62	-0.14	-0.02	4.47	.04	-14.97	826	428.4	120.9	-5.1
58.00	5.22	-0.14	-0.02	5.07	-14.98	.91	845	428.2	120.9	-4.5
58.20	5.17	-0.14	-0.02	5.02	.99	.92	843	428.0	120.9	-3.9
58.40	4.88	-0.14	-0.02	4.73	-15.02	.95	833	427.8	120.9	-3.3
58.60	4.78	-0.14	-0.02	4.63	.03	.96	827	427.6	120.8	-2.7
58.80	4.64	-0.14	-0.02	4.49	.05	.98	821	427.4	120.8	-2.1
59.00	4.20	-0.13	-0.02	4.05	.09	-15.03	804	427.2	120.7	-1.5
59.20	3.88	-0.13	-0.02	3.73	.14	.07	790	427.0	120.6	-0.9
59.40	3.99	-0.13	-0.02	3.84	.13	.06	793	426.8	120.6	-0.3
59.60	3.67	-0.13	-0.02	3.52	.16	.10	781	426.6	120.5	0.4
59.80	3.73	-0.13	-0.02	3.58	.16	.10	782	426.4	120.4	1.0
38360.00	3.50	-0.13	-0.02	3.35	-15.19	-15.13	772	426.1	120.3	1.6
60.50	3.49	-0.13	-0.02	3.34	.19	.14	769	425.6	120.0	3.2
61.00	3.53	-0.13	-0.02	3.38	.19	.14	769	425.1	119.7	4.9
61.50	3.43	-0.13	-0.02	3.28	.21	.16	763	424.6	119.3	6.5
62.00	3.33	-0.13	-0.02	3.19	.22	.18	757	424.0	119.0	8.2
62.50	3.47	-0.13	-0.02	3.32	.21	.17	761	423.5	118.5	9.9
38363.00	3.76	-0.13	-0.02	3.61	-15.17	-15.14	771	423.0	118.1	11.6
63.20	3.83	-0.13	-0.02	3.69	.16	.14	774	422.7	117.9	12.3
63.40	3.88	-0.13	-0.02	3.74	.16	.13	774	422.5	117.7	13.0
63.60	4.11	-0.13	-0.02	3.97	.13	.11	782	422.3	117.6	13.7
63.80	4.35	-0.13	-0.02	4.20	.10	.08	791	422.1	117.4	14.4
64.00	3.97	-0.13	-0.02	3.83	.14	.13	777	421.9	117.2	15.1
64.20	3.93	-0.13	-0.02	3.79	.15	.14	773	421.7	117.0	15.8
64.40	3.68	-0.13	-0.02	3.54	.19	.18	762	421.5	116.8	16.5
64.60	3.43	-0.13	-0.02	3.29	.22	.21	751	421.3	116.6	17.2
64.80	3.24	-0.13	-0.02	3.10	.25	.24	743	421.0	116.4	17.9
65.00	3.39	-0.13	-0.02	3.25	.23	.22	749	420.8	116.2	18.6
65.20	3.48	-0.13	-0.02	3.34	.21	.21	752	420.6	116.0	19.3
65.40	3.54	-0.13	-0.02	3.39	.21	.20	754	420.4	115.8	20.0
38365.50	3.63	-0.13	-0.02	3.49	-15.20	-15.19	757	420.3	115.6	20.3
66.00	4.27	-0.13	-0.01	4.13	.12	.12	780	419.8	115.1	22.1
66.50	5.01	-0.13	-0.01	4.87	.05	.05	803	419.2	114.6	23.8
67.00	4.94	-0.13	-0.01	4.80	.05	.06	800	418.7	114.1	25.6
67.50	4.65	-0.13	-0.01	4.51	.08	.10	788	418.2	113.6	27.3
68.00	4.58	-0.12	-0.01	4.44	.09	.11	785	417.7	113.1	29.1
68.50	4.59	-0.12	-0.01	4.45	.09	.12	783	417.2	112.6	30.8
69.00	4.57	-0.12	-0.01	4.44	.09	.12	781	416.6	112.1	32.5
69.50	4.48	-0.12	-0.01	4.34	.10	.14	777	416.1	111.7	34.2

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^5 \dot{p}$	$10^5 \dot{p}_s$	$10^5 \dot{p}_t$	$-10^5 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38370.00	4.30	-0.12	-0.01	4.16	-15.12	-15.16	769	415.6	111.2	35.8
70.50	4.18	-0.12	-0.01	4.04	.14	.09	763	415.1	110.8	37.5
71.00	4.22	-0.12	-0.01	4.08	.14	.09	764	414.6	110.5	39.1
71.50	4.25	-0.12	-0.01	4.12	.13	.09	764	414.1	110.1	40.7
72.00	4.40	-0.12	-0.01	4.26	.12	.08	768	413.6	109.8	42.3
72.50	4.20	-0.12	-0.01	4.07	.14	.11	761	413.1	109.6	43.9
38376.00	3.97	-0.12	-0.01	3.84	-15.15	-15.15	750	409.8	109.3	53.5
76.50	4.06	-0.12	-0.01	3.92	.13	.14	754	409.4	109.6	54.7
77.00	4.09	-0.12	-0.01	3.96	.13	.14	755	408.9	109.8	55.8
77.50	4.30	-0.12	-0.01	4.16	.10	.11	762	408.5	110.2	56.8
78.00	4.63	-0.12	-0.01	4.50	.06	.08	774	408.0	110.6	57.8
78.50	4.60	-0.12	-0.01	4.47	.06	.08	773	407.6	111.1	58.6
79.00	4.05	-0.12	-0.01	3.92	.12	.14	754	407.2	111.6	59.4
79.50	3.88	-0.12	-0.01	3.75	.14	.17	747	406.8	112.2	60.1
80.00	3.55	-0.12	-0.01	3.42	.17	.21	734	406.3	112.8	60.7
80.50	3.46	-0.12	-0.01	3.33	.19	.23	730	405.9	113.5	61.3
81.00	3.33	-0.11	-0.01	3.20	.20	.25	724	405.5	114.3	61.7
81.50	3.24	-0.11	-0.01	3.12	.21	.26	720	405.1	115.0	62.0
82.00	3.06	-0.11	-0.01	2.93	.24	.29	711	404.7	115.8	62.2
82.50	3.11	-0.11	-0.01	2.99	.23	.29	713	404.3	116.7	62.3
83.00	3.31	-0.11	-0.01	3.19	.19	.25	723	404.0	117.5	62.4
83.50	4.54	-0.11	-0.01	4.42	.05	.11	770	403.6	118.3	62.3
84.00	4.47	-0.11	-0.01	4.35	.05	.12	766	403.2	119.1	62.1
84.50	4.27	-0.11	-0.01	4.15	.08	.15	758	402.8	119.9	61.8
85.00	4.19	-0.10	-0.01	4.08	.08	.16	755	402.5	120.6	61.4
85.50	4.32	-0.10	-0.01	4.21	.07	.15	759	402.1	121.3	60.9
86.00	4.27	-0.10	-0.01	4.16	.08	.16	755	401.8	121.9	60.3
86.50	4.03	-0.10	-0.01	3.92	.11	.10	743	401.4	122.5	59.6
87.00	3.82	-0.10	-0.01	3.72	.14	.13	736	401.1	123.1	58.8
87.50	3.44	-0.10	-0.01	3.33	.19	.18	719	400.7	123.6	58.0
88.00	3.24	-0.10	-0.01	3.13	.22	.22	709	400.4	124.0	57.0
88.50	3.09	-0.09	-0.01	2.98	.24	.24	702	400.1	124.3	56.0
89.00	3.13	-0.09	-0.01	3.03	.24	.24	703	399.7	124.6	54.9
89.50	3.18	-0.09	-0.01	3.09	.23	.24	704	399.4	124.8	53.8
90.00	3.27	-0.09	-0.01	3.17	.22	.23	707	399.1	124.9	52.5
90.50	3.31	-0.09	-0.01	3.21	.21	.23	709	398.8	125.0	51.3
91.00	3.35	-0.09	-0.01	3.26	.21	.22	710	398.5	125.0	49.9
91.50	3.43	-0.08	-0.01	3.33	.20	.21	713	398.2	125.0	48.5
92.00	3.58	-0.08	-0.01	3.49	.17	.19	719	397.9	124.9	47.1
92.50	3.98	-0.08	-0.01	3.89	.12	.14	734	397.6	124.7	45.6
93.00	4.48	-0.08	-0.01	4.40	.07	.09	750	397.3	124.5	44.1
93.50	4.45	-0.08	-0.01	4.37	.08	.11	747	397.1	124.2	42.5
94.00	3.94	-0.08	-0.01	3.86	.14	.17	728	396.8	123.9	40.9
94.50	3.73	-0.07	-0.01	3.65	.16	.20	720	396.5	123.6	39.3
95.00	3.59	-0.07	-0.01	3.51	.18	.22	714	396.2	123.2	37.7
95.50	3.38	-0.07	-0.01	3.30	.21	.25	706	396.0	122.8	36.0
38396.00	3.35	-0.07	-0.01	3.27	-15.20	-15.25	705	395.7	122.3	34.3
96.20	4.37	-0.07	-0.01	4.29	.09	.13	741	395.6	122.2	33.6
96.40	4.79	-0.07	-0.01	4.72	.04	.08	757	395.5	122.0	32.9
96.60	6.33	-0.07	-0.01	6.26	-14.91	-14.95	802	395.4	121.8	32.2
96.80	7.87	-0.07	-0.01	7.80	.81	.85	839	395.3	121.6	31.5
97.00	6.71	-0.07	-0.01	6.64	.88	.93	810	395.2	121.4	30.8
97.20	5.55	-0.07	-0.01	5.48	.97	-15.02	778	395.1	121.2	30.1
97.40	5.01	-0.07	-0.01	4.94	-15.02	.06	762	395.0	121.0	29.4
97.60	4.73	-0.07	-0.01	4.65	.04	.09	753	394.9	120.8	28.7
97.80	4.38	-0.06	-0.01	4.31	.08	.13	741	394.8	120.6	28.0

Table-3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38398.00	4.24	-0.06	-0.01	4.17	-15.09	-15.14	737	394.7	120.4	27.3
98.50	4.08	-0.06	-0.01	4.01	.11	.16	731	394.4	119.8	25.5
99.00	3.72	-0.06	-0.01	3.65	.15	.20	718	394.2	119.3	23.8
99.50	3.58	-0.06	-0.01	3.51	.17	.22	712	393.9	118.8	22.0
38400.00	3.54	-0.06	-0.01	3.47	.16	.13	713	393.7	118.2	20.2
00.50	3.46	-0.06	-0.01	3.39	.17	.14	710	393.4	117.7	18.4
01.00	3.58	-0.06	-0.01	3.52	.15	.12	715	393.2	117.2	16.6
01.50	3.88	-0.06	-0.01	3.81	.11	.08	727	393.0	116.7	14.8
02.00	4.32	-0.06	-0.01	4.26	.06	.03	743	392.7	116.2	13.0
02.50	4.60	-0.06	-0.01	4.53	.03	.01	752	392.5	115.8	11.3
03.00	4.82	-0.06	-0.01	4.76	.00	-14.98	761	392.2	115.3	9.5
03.50	5.33	-0.06	-0.01	5.27	-14.95	.93	777	392.0	114.9	7.8
04.00	5.85	-0.06	-0.01	5.78	.91	.89	793	391.8	114.6	6.1
04.50	5.58	-0.06	-0.01	5.51	.92	.91	786	391.5	114.3	4.4
05.00	5.43	-0.06	-0.01	5.36	.94	.92	782	391.3	114.0	2.7
05.50	5.25	-0.06	-0.01	5.19	.95	.94	777	391.0	113.7	1.1
06.00	5.03	-0.06	-0.01	4.97	.96	.96	770	390.8	113.6	-0.5
06.50	4.88	-0.06	-0.01	4.81	.97	.97	765	390.5	113.5	-2.1
07.00	4.72	-0.06	-0.01	4.65	.99	.98	761	390.3	113.4	-3.6
07.50	4.63	-0.07	-0.01	4.56	.99	.99	759	390.0	113.4	-5.1
08.00	4.47	-0.07	-0.01	4.39	-15.01	-15.01	753	389.7	113.5	-6.6
08.50	4.48	-0.08	-0.01	4.40	.00	.01	753	389.5	113.6	-7.9
09.00	4.37	-0.08	-0.01	4.28	.01	.02	749	389.2	113.8	-9.3
09.50	4.30	-0.09	-0.01	4.21	.01	.03	747	389.0	114.1	-10.5
38410.00	4.40	-0.09	-0.01	4.30	-15.00	-15.01	751	388.7	114.5	-11.7
10.20	4.51	-0.09	-0.01	4.41	-14.99	.00	755	388.6	114.7	-12.2
10.40	5.43	-0.09	-0.01	5.33	.90	-14.92	785	388.5	114.8	-12.6
10.60	7.49	-0.09	-0.01	7.39	.76	.77	840	388.4	115.0	-13.1
10.80	7.28	-0.10	-0.01	7.18	.77	.79	835	388.2	115.2	-13.5
11.00	6.58	-0.10	-0.01	6.47	.82	.83	817	388.1	115.5	-13.9
11.20	6.11	-0.10	-0.01	6.00	.85	.87	804	388.0	115.7	-14.3
11.40	6.07	-0.10	-0.01	5.96	.85	.87	803	387.9	115.9	-14.7
11.60	5.71	-0.10	-0.01	5.60	.88	.90	793	387.8	116.2	-15.0
11.80	5.68	-0.10	-0.01	5.57	.88	.90	791	387.7	116.5	-15.4
12.00	5.41	-0.10	-0.01	5.29	.90	.92	782	387.6	116.7	-15.7
12.20	4.76	-0.10	-0.01	4.65	.96	.98	762	387.4	117.0	-16.0
12.40	4.46	-0.11	-0.01	4.35	.98	-15.01	753	387.3	117.3	-16.3
12.60	4.57	-0.11	-0.01	4.45	.97	.00	756	387.2	117.6	-16.6
12.80	4.67	-0.11	-0.01	4.55	.96	-14.99	758	387.1	117.9	-16.9
38413.00	4.60	-0.11	-0.01	4.48	-14.97	-15.00	755	387.0	118.2	-17.1
13.50	4.69	-0.11	-0.01	4.57	.96	-14.99	757	386.7	119.1	-17.7
14.00	4.66	-0.11	-0.01	4.54	.97	.91	755	386.4	120.0	-18.2
14.50	4.80	-0.11	-0.01	4.67	.95	.90	758	386.0	120.9	-18.5
15.00	4.53	-0.11	-0.01	4.40	.98	.92	748	385.7	121.8	-18.8
15.50	4.30	-0.12	-0.01	4.18	-15.00	.95	739	385.4	122.8	-18.9
16.00	4.20	-0.12	-0.01	4.08	.01	.96	735	385.1	123.7	-18.9
16.50	4.20	-0.12	-0.01	4.08	.01	.96	734	384.7	124.6	-18.8
17.00	4.30	-0.12	-0.01	4.18	.00	.96	735	384.4	125.5	-18.6
17.50	4.39	-0.12	-0.01	4.26	.00	.95	736	384.0	126.4	-18.3
18.00	4.46	-0.12	-0.01	4.34	-14.99	.95	738	383.7	127.2	-17.9
38418.20	4.57	-0.12	-0.01	4.44	-14.98	-14.94	740	383.6	127.6	-17.7
18.40	4.71	-0.12	-0.01	4.58	.97	.93	744	383.4	127.9	-17.5
18.60	5.09	-0.12	-0.01	4.96	.93	.90	756	383.3	128.2	-17.3
18.80	5.41	-0.12	-0.01	5.28	.91	.88	764	383.1	128.4	-17.0
19.00	5.61	-0.12	-0.01	5.48	.89	.86	768	383.0	128.7	-16.8
19.20	5.33	-0.12	-0.01	5.20	.92	.89	759	382.8	129.0	-16.5
19.40	5.21	-0.12	-0.01	5.09	.93	.90	755	382.7	129.2	-16.2

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38419.60	5.07	-0.12	-0.01	4.94	-14.94	-14.92	749	382.5	129.5	-15.9
19.80	5.07	-0.12	-0.01	4.94	.94	.92	747	382.4	129.7	-15.6
20.00	5.04	-0.12	-0.01	4.91	.95	.92	747	382.2	129.9	-15.3
38420.50	4.92	-0.12	-0.01	4.79	-14.96	-14.94	740	381.9	130.4	-14.4
21.00	4.65	-0.12	-0.01	4.52	.99	.98	728	381.5	130.9	-13.4
21.50	4.54	-0.12	-0.01	4.41	-15.01	-15.00	721	381.1	131.2	-12.4
22.00	4.06	-0.12	-0.01	3.94	.06	.06	703	380.7	131.5	-11.3
22.50	4.35	-0.12	-0.01	4.22	.04	.03	710	380.3	131.7	-10.1
38423.00	4.95	-0.11	-0.01	4.83	-14.98	-14.98	726	379.9	131.8	-8.9
23.20	5.36	-0.11	-0.01	5.23	.94	.95	737	379.7	131.8	-8.4
23.40	5.81	-0.11	-0.01	5.69	.91	.91	748	379.6	131.9	-7.9
23.60	6.21	-0.11	-0.01	6.08	.88	.89	757	379.4	131.9	-7.3
23.80	6.01	-0.11	-0.01	5.88	.90	.90	751	379.2	131.9	-6.8
24.00	6.29	-0.11	-0.01	6.16	.88	.89	756	379.1	131.9	-6.3
24.20	5.79	-0.11	-0.01	5.67	.92	.93	742	378.9	131.8	-5.7
24.40	5.30	-0.11	-0.01	5.18	.96	.97	727	378.7	131.8	-5.2
24.60	5.09	-0.11	-0.01	4.97	.98	-15.00	720	378.6	131.8	-4.6
24.80	5.03	-0.11	-0.01	4.90	.99	.00	717	378.4	131.7	-4.0
25.00	4.99	-0.11	-0.01	4.86	.99	.01	715	378.2	131.7	-3.5
25.20	4.72	-0.11	-0.01	4.60	-15.02	.04	705	378.1	131.6	-2.9
25.40	4.79	-0.11	-0.01	4.67	.02	.04	706	377.9	131.5	-2.3
25.60	5.10	-0.11	-0.01	4.97	-14.99	.01	715	377.7	131.4	-1.7
25.80	6.28	-0.11	-0.01	6.16	.89	-14.91	746	377.6	131.3	-1.1
26.00	6.35	-0.11	-0.01	6.23	.88	.91	747	377.4	131.2	-0.5
26.20	5.63	-0.11	-0.01	5.51	.94	.96	727	377.2	131.1	0.1
26.40	5.28	-0.11	-0.01	5.16	.97	-15.00	716	377.1	131.0	0.7
26.60	5.21	-0.11	-0.01	5.09	.99	.02	712	376.9	130.9	1.3
26.80	5.06	-0.11	-0.01	4.94	-15.00	.03	706	376.7	130.8	1.9
38427.00	4.93	-0.11	-0.01	4.82	-15.01	-15.04	703	376.5	130.6	2.6
27.50	4.70	-0.10	-0.01	4.58	.03	.07	694	376.1	130.3	4.1
28.00	4.44	-0.10	-0.01	4.32	.07	.11	683	375.7	129.9	5.7
28.50	4.20	-0.10	-0.01	4.08	.10	.15	673	375.2	129.5	7.3
29.00	4.44	-0.10	-0.01	4.33	.07	.12	679	374.8	129.0	9.0
29.50	4.84	-0.10	-0.01	4.72	.02	.08	691	374.4	128.6	10.6
30.00	5.08	-0.10	-0.01	4.97	.00	.06	696	373.9	128.1	12.3
30.50	5.31	-0.10	-0.01	5.20	-14.98	.05	700	373.5	127.6	13.9
38430.60	5.39	-0.10	-0.01	5.28	-14.97	-15.04	702	373.4	127.5	14.2
30.80	5.69	-0.10	-0.01	5.58	.95	-14.82	708	373.2	127.3	14.9
31.00	5.89	-0.10	-0.01	5.78	.93	.80	714	373.0	127.1	15.6
31.20	6.65	-0.10	-0.01	6.54	.87	.76	732	372.9	126.9	16.2
31.40	7.93	-0.10	-0.01	7.82	.79	.68	760	372.7	126.7	16.9
31.60	8.41	-0.10	-0.01	8.30	.76	.66	768	372.5	126.5	17.6
31.80	8.21	-0.10	-0.01	8.10	.78	.67	762	372.3	126.3	18.2
32.00	7.91	-0.09	-0.01	7.80	.80	.69	754	372.1	126.1	18.9
32.20	7.88	-0.09	-0.01	7.78	.80	.69	752	372.0	125.9	19.5
32.40	7.66	-0.09	-0.01	7.55	.81	.71	746	371.8	125.8	20.2
32.60	7.48	-0.09	-0.01	7.37	.83	.72	742	371.6	125.6	20.9
32.80	7.52	-0.09	-0.01	7.41	.83	.72	741	371.4	125.4	21.5
33.00	7.41	-0.09	-0.01	7.31	.83	.73	738	371.3	125.2	22.2
33.20	7.47	-0.09	-0.01	7.37	.83	.73	738	371.1	125.0	22.8
33.40	7.41	-0.09	-0.01	7.31	.83	.73	735	370.9	124.8	23.5
33.60	7.57	-0.09	-0.01	7.47	.83	.73	736	370.7	124.7	24.1
33.80	7.84	-0.09	-0.01	7.73	.82	.71	741	370.5	124.5	24.8
34.00	8.66	-0.09	-0.01	8.56	.77	.67	757	370.4	124.3	25.4
34.20	9.40	-0.09	-0.01	9.29	.72	.64	771	370.2	124.2	26.1
34.40	9.14	-0.09	-0.01	9.04	.74	.65	765	370.0	124.0	26.7

Table 3 (cont.)

1961 61 (Explorer 9)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38434.60	7.96	-0.09	-0.01	7.86	-14.81	-14.72	741	369.8	123.8	27.3
34.80	7.62	-0.09	-0.01	7.51	.83	.74	733	369.7	123.7	28.0
38435.00	7.52	-0.09	-0.01	7.41	-14.83	-14.75	729	369.5	123.6	28.6
35.50	6.79	-0.09	-0.01	6.69	.88	.80	712	369.0	123.2	30.2
36.00	6.74	-0.09	-0.01	6.64	.89	.80	708	368.6	122.9	31.7
36.50	6.86	-0.09	-0.01	6.76	.89	.80	708	368.1	122.7	33.2
37.00	7.12	-0.09	-0.01	7.01	.87	.79	711	367.7	122.5	34.7
38445.00	7.07	-0.09	-0.01	6.98	-14.84	-14.83	693	360.9	129.1	49.7
45.50	9.07	-0.09	-0.01	8.97	.73	.72	728	360.5	130.2	49.9
46.00	10.05	-0.09	-0.01	9.96	.68	.67	745	360.1	131.2	49.9
46.50	10.62	-0.08	-0.01	10.53	.65	.66	751	359.8	132.3	49.8
47.00	9.64	-0.08	-0.01	9.56	.70	.71	731	359.4	133.3	49.5
47.50	9.07	-0.08	-0.01	8.99	.74	.75	719	359.0	134.4	49.1
38448.00	8.92			8.92	-14.75	-14.67	711	358.6	135.4	48.6
48.20	8.63			8.63	.77	.69	705	358.5	135.8	48.4
48.40	8.88			8.88	.76	.68	707	358.3	136.2	48.2
48.60	9.12			9.12	.75	.67	709	358.2	136.6	47.9
48.80	9.34			9.34	.74	.66	711	358.0	137.0	47.6
49.00	9.48			9.48	.73	.66	712	357.9	137.3	47.3
49.20	9.72			9.72	.73	.65	715	357.7	137.7	47.0
49.40	9.92			9.92	.72	.65	716	357.6	138.0	46.6
49.60	10.13			10.13	.71	.64	718	357.5	138.4	46.3
49.80	10.29			10.29	.71	.64	719	357.3	138.7	45.9
50.00	10.49			10.49	.70	.63	720	357.2	139.0	45.5
50.20	11.33			11.33	.67	.60	731	357.0	139.3	45.1
50.40	11.91			11.91	.65	.58	737	356.9	139.6	44.6
50.60	12.74			12.74	.62	.56	747	356.8	139.8	44.2
50.80	12.92			12.92	.61	.55	748	356.6	140.1	43.7
51.00	13.67			13.67	.58	.53	756	356.5	140.3	43.2
51.20	14.30			14.30	.57	.51	762	356.4	140.5	42.8
51.40	14.14			14.14	.58	.52	758	356.2	140.8	42.2
51.60	13.86			13.86	.58	.53	753	356.1	141.0	41.7
51.80	13.22			13.22	.61	.56	744	356.0	141.1	41.2
52.00	13.09			13.09	.62	.56	741	355.8	141.3	40.6
52.20	13.19			13.19	.62	.56	741	355.7	141.5	40.1
52.40	13.20			13.20	.62	.57	740	355.6	141.6	39.5
52.60	13.25			13.25	.62	.57	739	355.5	141.8	38.9
52.80	13.27			13.27	.62	.57	738	355.3	141.9	38.3
53.00	13.28			13.28	.62	.57	736	355.2	142.0	37.7
53.20	13.36			13.36	.61	.57	736	355.1	142.1	37.1
53.40	13.44			13.44	.61	.57	736	355.0	142.2	36.4
53.60	13.50			13.50	.61	.57	735	354.8	142.2	35.8
53.80	13.47			13.47	.61	.57	733	354.7	142.3	35.1
54.00	13.44			13.44	.62	.58	732	354.6	142.3	34.5
54.20	13.29			13.29	.63	.59	730	354.5	142.4	33.8
54.40	13.27			13.27	.63	.59	729	354.4	142.4	33.1
54.60	13.24			13.24	.63	.59	727	354.3	142.4	32.4
54.80	12.19			12.19	.66	.52	717	354.1	142.4	31.7
55.00	11.75			11.75	.68	.54	712	354.0	142.4	31.0
55.20	11.47			11.47	.68	.55	708	353.9	142.4	30.2
55.40	11.40			11.40	.69	.55	707	353.8	142.3	29.5
55.60	11.09			11.09	.70	.56	704	353.7	142.3	28.8
55.80	10.79			10.79	.71	.57	700	353.6	142.2	28.0
56.00	10.45			11.45	.73	.58	695	353.5	142.2	27.3
56.20	10.38			10.38	.73	.58	696	353.4	142.1	26.5
56.40	10.21			10.21	.74	.59	693	353.3	142.0	25.7

Table 3 (cont.)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

1961 51 (Explorer 9)

MJD	$-10^4 \dot{P}$	$10^4 \dot{P}_S$	$10^4 \dot{P}_t$	$-10^4 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38456.60	1.02		1.02		-14.74	-14.59	694	353.2	141.9	25.0
56.80	1.03		1.03		.73	.58	695	353.1	141.9	24.2
57.00	1.03		1.03		.73	.58	695	353.0	141.8	23.4
57.20	0.99		.99		.74	.60	689	352.9	141.6	22.6
57.40	1.01		1.01		.73	.59	692	352.8	141.5	21.8
57.60	1.03		1.03		.72	.58	694	352.7	141.4	21.0
57.80	1.04		1.04		.71	.58	695	352.6	141.3	20.2
58.00	1.05		1.05		.70	.58	696	352.5	141.2	19.4
58.20	1.29		1.29		.61	.49	726	352.4	141.0	18.5
58.40	1.60		1.60		.51	.41	760	352.3	140.9	17.7
58.60	1.99		1.99		.41	.32	798	352.3	140.7	16.9
58.80	2.23		2.23		.37	.27	818	352.2	140.6	16.0
59.00	1.97		1.97		.42	.33	792	352.1	140.4	15.2
59.20	1.85		1.85		.45	.36	779	352.0	140.3	14.4
59.40	1.78		1.78		.47	.37	771	351.9	140.1	13.5
59.60	1.74		1.74		.49	.38	766	351.8	139.9	12.7
59.80	1.69		1.69		.50	.40	759	351.7	139.8	11.8
60.00	1.67		1.67		.51	.41	755	351.7	139.6	11.0
60.20	1.65		1.65		.52	.42	751	351.6	139.4	10.1
60.40	1.62		1.62		.53	.43	746	351.5	139.2	9.2
60.60	1.54		1.54		.56	.45	737	351.4	139.1	8.4
60.80	1.39		1.39		.60	.50	719	351.4	138.9	7.5
61.00	1.32		1.32		.63	.53	707	351.3	138.7	6.6
61.20	1.29		1.29		.65	.54	703	351.2	138.5	5.8
61.40	1.27		1.27		.66	.55	700	351.2	138.3	4.9
61.60	1.28		1.28		.65	.55	701	351.1	138.2	4.0
61.80	1.33		1.33		.64	.53	706	351.0	138.0	3.2
62.00	1.40		1.40		.61	.51	713	351.0	137.8	2.3
62.20	1.41		1.41		.61	.51	713	350.9	137.6	1.4
62.40	1.41		1.41		.61	.51	713	350.8	137.5	0.5
62.60	1.45		1.45		.59	.50	717	350.8	137.3	-0.3
62.80	1.50		1.50		.58	.48	723	350.7	137.1	-1.2
63.00	1.50		1.50		.58	.48	722	350.6	137.0	-2.1
63.20	1.49		1.49		.58	.49	721	350.6	136.8	-2.9
63.40	1.49		1.49		.58	.49	721	350.5	136.7	-3.8
63.60	1.46		1.46		.59	.49	718	350.4	136.5	-4.7
63.80	1.40		1.40		.62	.51	714	350.4	136.4	-5.6
64.00	1.31		1.31		.65	.54	705	350.3	136.2	-6.4
64.20	1.27		1.27		.67	.55	702	350.2	136.1	-7.3
64.40	1.21		1.21		.68	.57	694	350.2	136.0	-8.1
64.60	1.19		1.19		.69	.58	691	350.1	135.9	-9.0
64.80	1.17		1.17		.69	.58	687	350.1	135.7	-9.8
65.00	1.19		1.19		.68	.58	689	350.0	135.6	-10.7
65.20	1.25		1.25		.66	.56	696	349.9	135.5	-11.5
65.40	1.28		1.28		.65	.55	699	349.9	135.5	-12.4
65.60	1.34		1.34		.62	.53	705	349.8	135.4	-13.2
65.80	1.36		1.36		.62	.52	708	349.8	135.3	-14.1
66.00	1.39		1.39		.61	.51	712	349.7	135.2	-14.9
66.20	1.45		1.45		.58	.49	719	349.7	135.2	-15.7
66.40	1.49		1.49		.57	.48	722	349.6	135.1	-16.5
66.60	1.56		1.56		.55	.46	729	349.5	135.1	-17.3
66.80	1.53		1.53		.56	.47	725	349.5	135.1	-18.1
67.00	1.50		1.50		.57	.48	722	349.4	135.1	-18.9
67.20	1.37		1.37		.61	.52	708	349.4	135.1	-19.7
67.40	1.36		1.36		.62	.52	706	349.3	135.1	-20.5
67.60	1.36		1.36		.61	.53	705	349.2	135.2	-21.3
67.80	1.36		1.36		.62	.53	704	349.2	135.2	-22.0
68.00	1.34		1.34		.63	.54	702	349.1	135.3	-22.8
68.20	1.29		1.29		.64	.55	695	349.0	135.3	-23.5
68.40	1.30		1.30		.64	.55	695	349.0	135.4	-24.3

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^4 \dot{P}$	$10^4 \dot{P}_s$	$10^4 \dot{P}_t$	$-10^4 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38468.60	1.34		1.34		-14.63	-14.54	699	348.9	135.5	-25.0
68.80	1.36		1.36		.62	.54	700	348.8	135.6	-25.7
69.00	1.38		1.38		.62	.54	698	348.7	135.8	-26.4
69.20	1.46		1.46		.60	.52	705	348.7	135.9	-27.1
38469.50	1.43		1.43		-14.61	-14.53	702	348.5	136.2	-28.1
70.00	1.41		1.41		.61	.54	700	348.3	136.7	-29.7
70.50	1.41		1.41		.61	.53	700	348.1	137.3	-31.2
71.00	1.43		1.43		.60	.53	703	347.9	138.0	-32.6
71.50	1.45		1.45		.59	.52	706	347.6	138.9	-33.9
72.00	1.48		1.48		.58	.51	710	347.4	139.8	-35.0
72.50	1.33		1.33		.62	.55	696	347.1	140.8	-36.1
73.00	1.19		1.19		.66	.59	681	346.8	141.9	-37.0
73.50	1.15		1.15		.67	.60	677	346.4	143.1	-37.7
74.00	1.14		1.14		.67	.60	677	346.0	144.3	-38.4
74.50	1.24		1.24		.63	.57	688	345.6	145.6	-38.8
75.00	1.37		1.37		.57	.52	706	345.1	146.9	-39.1
75.50	1.54		1.54		.52	.48	719	344.7	148.2	-39.2
76.00	1.57		1.57		.52	.48	716	344.1	149.5	-39.2
38476.20	1.54		1.54		-14.54	-14.50	710	343.9	150.0	-39.2
76.40	1.58		1.58		.53	.49	712	343.7	150.5	-39.1
76.60	1.72		1.72		.50	.46	723	343.4	151.0	-39.0
76.80	1.93		1.93		.45	.42	737	343.2	151.4	-38.8
77.00	2.27		2.27		.38	.36	761	342.9	151.9	-38.7
77.20	2.22		2.22		.40	.37	754	342.7	152.3	-38.5
77.40	2.14		2.14		.40	.38	751	342.4	152.8	-38.3
77.60	2.32		2.32		.37	.35	762	342.1	153.2	-38.1
77.80	2.23		2.23		.39	.38	752	341.9	153.6	-37.8
78.00	2.07		2.07		.43	.41	737	341.6	154.0	-37.6
78.20	2.05		2.05		.44	.43	733	341.3	154.4	-37.3
78.40	2.03		2.03		.44	.44	728	340.9	154.8	-37.0
78.60	2.03		2.03		.45	.44	724	340.6	155.1	-36.6
78.80	2.03		2.03		.45	.45	721	340.3	155.5	-36.3
79.00	2.04		2.04		.45	.45	719	339.9	155.8	-35.9
79.20	2.03		2.03		.46	.46	717	339.6	156.1	-35.5
79.40	2.02		2.02		.46	.47	713	339.2	156.3	-35.1
79.60	2.01		2.01		.47	.48	710	338.8	156.6	-34.7
79.80	2.00		2.00		.47	.49	707	338.5	156.8	-34.2
80.00	1.98		1.98		.48	.50	702	338.1	157.1	-33.8
80.20	1.97		1.97		.48	.50	699	337.7	157.3	-33.3
80.40	1.94		1.94		.49	.51	694	337.2	157.5	-32.8
80.60	1.94		1.94		.49	.52	694	336.8	157.6	-32.3
80.80	1.92		1.92		.49	.53	693	336.4	157.8	-31.8
81.00	1.86		1.86		.51	.55	688	335.9	157.9	-31.2
81.20	1.83		1.83		.51	.56	685	335.5	158.0	-30.7
81.40	1.81		1.81		.51	.57	684	335.0	158.1	-30.1
81.60	1.77		1.77		.52	.58	680	334.5	158.2	-29.5
81.80	1.75		1.75		.52	.59	679	334.0	158.3	-28.9
82.00	1.90		1.90		.46	.42	697	333.5	158.3	-28.3
82.20	1.94		1.94		.44	.41	701	333.0	158.4	-27.7
82.40	2.00		2.00		.42	.40	706	332.4	158.4	-27.1
82.60	2.05		2.05		.41	.38	711	331.9	158.4	-26.5
82.80	2.10		2.10		.39	.37	715	331.3	158.4	-25.8
83.00	2.16		2.16		.37	.36	719	330.7	158.3	-25.2
83.20	2.25		2.25		.34	.34	726	330.1	158.3	-24.5
83.40	2.26		2.26		.34	.34	727	329.5	158.2	-23.8
83.60	2.04		2.04		.36	.26	713	328.9	158.1	-23.2
83.80	2.19		2.19		.33	.23	722	328.3	158.1	-22.5
84.00	2.35		2.35		.30	.21	731	327.6	158.0	-21.8

Table 3 (cont.)

1961 51 (Explorer 9)

MJD	$-10^4 \dot{p}$	$10^4 \dot{p}_s$	$10^4 \dot{p}_t$	$-10^4 \dot{p}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38484.20	2.50		2.50		-14.27	-14.19	739	326.9	157.9	-21.1
84.40	2.65		2.65		.24	.18	745	326.3	157.7	-20.4
84.60	2.99		2.99		.19	.13	763	325.5	157.6	-19.7
84.80	3.18		3.18		.16	.11	771	324.8	157.5	-18.9
85.00	3.34		3.34		.14	.10	777	324.1	157.3	-18.2
85.20	3.31		3.31		.13	.10	777	323.3	157.1	-17.5
85.40	3.16		3.16		.14	.11	772	322.6	157.0	-16.7
85.60	2.83		2.83		.19	.17	748	321.8	156.8	-16.0
85.80	2.86		2.86		.19	.18	744	321.0	156.6	-15.3
86.00	2.04		2.04		.34	.34	684	320.2	156.4	-14.5
86.20	2.09		2.09		.33	.34	683	319.3	156.2	-13.8
86.40	2.99		2.99		.18	.20	738	318.5	156.0	-13.0
86.60	3.59		3.59		.11	.14	764	317.6	155.7	-12.2
86.80	4.25		4.25		.05	.09	778	316.7	155.5	-11.5
87.00	5.00		5.00		.00	.04	791	315.8	155.3	-10.7
87.20	5.05		5.05		.01	.06	781	314.9	155.0	-9.9
87.40	4.60		4.60		.05	.11	761	313.9	154.8	-9.2
87.60	4.51		4.51		.05	.13	757	312.9	154.5	-8.4
87.80	4.29		4.29		.08	.17	741	311.9	154.3	-7.6
88.00	4.31		4.31		.09	.19	731	310.9	154.0	-6.9
88.20	4.35		4.35		.09	.20	724	309.9	153.7	-6.1
88.40	4.39		4.39		.10	.22	718	308.8	153.5	-5.3
88.60	4.34		4.34		.10	.01	715	307.8	153.2	-4.5
88.80	4.30		4.30		.10	.03	707	306.7	152.9	-3.8
89.00	4.27		4.27		.11	.05	699	305.5	152.7	-3.0
89.20	4.24		4.24		.12	.07	691	304.4	152.4	-2.2
89.40	4.11		4.11		.14	.10	678	303.2	152.1	-1.4
89.60	4.32		4.32		.12	.10	682	302.0	151.8	-0.7
89.80	4.31		4.31		.13	.12	676	300.8	151.5	0.1
90.00	4.31		4.31		.13	.14	668	299.6	151.3	0.9
90.20	4.53		4.53		.12	.14	665	298.3	151.0	1.6
90.40	4.65		4.65		.12	.16	658	297.0	150.7	2.4
90.60	4.77		4.77		.12	.17	653	295.7	150.4	3.2
90.80	4.79		4.79		.13	.20	645	294.4	150.1	3.9
91.00	4.92		4.92		.13	.22	637	293.0	149.9	4.7
91.20	5.16		5.16		.13	.23	629	291.6	149.6	5.4
91.40	5.09		5.09		.15	.27	617	290.2	149.3	6.2
91.60	5.23		5.23		.15	.29	612	288.8	149.1	6.9
91.80	5.59		5.59		.15	.30	610	287.3	148.8	7.7
92.00	5.64		5.64		.16	.34	595	285.8	148.5	8.4
92.20	5.80		5.80		.17	.36	579	284.3	148.3	9.2
92.40	6.17		6.17		.17	.38	570	282.8	148.0	9.9
92.60	6.65		6.65		.17	.39	565	281.2	147.8	10.6
92.80	7.55		7.55		.14	.39	565	279.6	147.6	11.4
93.00	8.34		8.34		.13	.40	557	278.0	147.3	12.1
93.20	8.82		8.82		.14	.43	544	276.3	147.1	12.8
93.40	10.33		10.33		.11	.42	544	274.7	146.9	13.5
93.60	10.60		10.60		.14	.46	522	272.9	146.7	14.2
93.80	13.54		13.54		.08	.42	530	271.2	146.5	14.9
94.00	17.27		17.27		.03	.39	540	269.4	146.3	15.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38386.50	2.85	8.57	1.12	12.54	-16.97	-17.03	800	684.0	338.1	49.3
87.00	2.17	8.71	1.13	12.01	.99	.05	793	685.4	336.8	50.3
87.50	1.73	8.82	1.14	11.69	-17.01	.06	789	686.8	335.6	51.2
88.00	1.13	8.91	1.15	11.20	.02	.06	784	688.2	334.3	52.1
88.50	0.24	8.99	1.16	10.39	.06	.09	771	689.6	333.0	53.1
89.00	-0.04	9.05	1.17	10.18	.06	.09	770	690.9	331.7	54.0
89.50	-0.40	9.12	1.18	9.90	.08	.10	767	692.3	330.4	54.9
90.00	-0.75	9.14	1.18	9.57	.09	.11	759	693.6	329.1	55.9
90.50	-0.77	9.20	1.19	9.61	.10	.11	759	695.0	327.8	56.8
91.00	-0.76	9.33	1.20	9.78	.09	.10	763	696.3	326.5	57.7
38391.25	-0.60	9.25	1.20	9.85	-17.08	-17.09	766	696.9	325.8	58.2
91.50	-0.54	9.27	1.20	9.93	.09	.10	762	697.6	325.1	58.6
91.75	-0.48	9.28	1.20	10.00	.09	.09	763	698.2	324.5	59.1
92.00	-0.32	9.30	1.21	10.20	.08	.08	765	698.9	323.8	59.5
92.25	0.58	9.30	1.21	11.09	.05	.05	779	699.5	323.1	60.0
92.50	0.44	9.30	1.21	10.95	.05	.05	778	700.2	322.5	60.5
92.75	0.10	9.31	1.21	10.62	.07	.07	771	700.8	321.8	60.9
93.00	-0.03	9.33	1.21	10.51	.08	.07	768	701.4	321.1	61.4
93.25	-0.36	9.33	1.21	10.18	.08	.08	766	702.0	320.4	61.8
93.50	-0.69	9.35	1.21	9.87	.09	.08	767	702.7	319.8	62.3
93.75	-0.82	9.36	1.21	9.76	.09	.08	765	703.3	319.1	62.7
94.00	-1.14	9.37	1.21	9.44	.11	.10	757	703.9	318.4	63.2
94.25	-1.46	9.37	1.21	9.12	.12	.11	753	704.5	317.7	63.6
94.50	-1.58	9.41	1.21	9.04	.12	.11	753	705.1	317.0	64.1
94.75	-1.89	9.41	1.21	8.72	.14	.12	747	705.7	316.4	64.6
95.00	-1.69	9.42	1.21	8.94	.12	.11	752	706.3	315.7	65.0
95.25	-1.48	9.44	1.20	9.16	.11	.10	757	706.9	315.0	65.5
95.50	-1.38	9.44	1.20	9.26	.11	.09	757	707.5	314.3	65.9
95.75	-1.17	9.44	1.20	9.47	.11	.08	759	708.0	313.6	66.4
96.00	-0.74	9.44	1.20	9.89	.09	.07	766	708.6	312.9	66.8
38396.10	-1.93	9.44	1.19	8.70	-17.15	-17.12	738	708.8	312.6	67.0
96.20	0.01	9.44	1.19	10.64	.06	.03	782	709.1	312.3	67.2
96.30	1.96	9.43	1.19	12.58	-16.98	-16.96	815	709.3	312.0	67.3
96.40	2.61	9.42	1.19	13.22	.98	.95	815	709.5	311.8	67.5
96.50	3.26	9.41	1.19	13.86	.97	.94	816	709.7	311.5	67.7
96.60	4.56	9.40	1.18	15.14	.94	.90	832	710.0	311.2	67.9
96.70	3.92	9.39	1.18	14.49	.96	.92	824	710.2	310.9	68.1
96.80	2.63	9.37	1.18	13.19	-17.00	.96	807	710.4	310.6	68.2
96.90	2.64	9.37	1.18	13.19	-16.99	.95	810	710.6	310.3	68.4
97.00	0.70	9.36	1.18	11.25	-17.06	-17.02	780	710.9	310.0	68.6
97.10	0.71	9.35	1.18	11.24	.05	.02	783	711.1	309.8	68.8
38397.25	0.57	9.35	1.18	11.10	-17.06	-17.02	781	711.4	309.3	69.0
97.50	-0.14	9.34	1.17	10.37	.08	.05	769	712.0	308.6	69.5
97.75	-0.32	9.30	1.16	10.14	.09	.05	766	712.5	307.9	69.9
38398.00	-0.35	9.25	1.16	10.06	-17.10	-17.06	763	713.0	307.2	70.4
98.50	-0.53	9.23	1.15	9.85	.10	.06	759	714.1	305.7	71.2
99.00	-0.86	9.15	1.14	9.44	.12	.07	753	715.1	304.2	72.1
99.50	-0.84	9.12	1.12	9.40	.12	.07	756	716.1	302.7	73.0
38400.00	-0.79	9.04	1.10	9.34	.11	.07	757	717.1	301.2	73.9
00.50	-0.74	8.93	1.09	9.28	.12	.07	757	718.0	299.7	74.8
01.00	-0.61	8.83	1.08	9.30	.11	.06	760	719.0	298.1	75.6
01.50	-0.36	8.72	1.06	9.42	.11	.05	761	719.9	296.5	76.5
02.00	-0.24	8.61	1.04	9.41	.11	.05	760	720.8	294.9	77.3
02.50	-0.07	8.49	1.02	9.44	.10	.05	764	721.6	293.3	78.2
03.00	0.03	8.30	1.00	9.33	.11	.05	758	722.4	291.6	79.0
03.50	0.13	8.19	0.98	9.30	.12	.05	754	723.2	289.9	79.9

Table 3 (cont.)

1963 53A (Explorer 19)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38404.00	0.45	7.99	0.96	9.39	-17.12	-17.05	754	724.0	288.2	80.7
04.50	0.73	7.83	0.94	9.50	.11	.04	756	724.7	286.5	81.6
05.00	0.66	7.66	0.92	9.24	.12	.05	754	725.4	284.7	82.4
05.50	0.74	7.46	0.90	9.10	.12	.05	754	726.1	282.8	83.2
06.00	0.77	7.26	0.88	8.91	.13	.06	751	726.7	280.9	84.0
06.50	0.83	7.06	0.86	8.75	.13	.06	749	727.3	279.0	84.8
07.00	0.93	6.86	0.84	8.64	.14	.06	747	727.9	277.0	85.7
07.50	1.14	6.72	0.81	8.67	.14	.06	748	728.4	274.9	86.4
08.00	1.30	6.52	0.79	8.60	.14	.06	748	728.9	272.8	87.2
08.50	1.55	6.28	0.76	8.60	.14	.06	749	729.4	270.6	88.0
09.00	1.85	6.17	0.74	8.76	.13	.05	754	729.8	268.3	88.8
09.50	2.07	5.83	0.70	8.61	.14	.06	751	730.2	265.9	89.5
10.00	2.34	5.57	0.68	8.59	.14	.06	749	730.6	263.4	90.3
10.50	2.85	5.36	0.64	8.85	.13	.05	749	730.9	260.8	91.0
11.00	2.66	5.10	0.62	8.38	.16	.07	731	731.1	258.0	91.7
11.50	2.33	4.83	0.59	7.76	.19	.10	716	731.4	255.1	92.4
12.00	2.45	4.60	0.56	7.61	.19	.11	717	731.6	252.1	93.0
12.50	2.60	4.31	0.52	7.43	.20	.12	716	731.8	248.9	93.7
13.00	2.69	4.08	0.50	7.26	.21	.12	713	731.9	245.5	94.3
13.50	2.80	3.78	0.46	7.04	.22	.14	706	732.0	241.9	94.9
14.00	2.97	3.55	0.43	6.96	.23	.14	701	732.0	238.0	95.4
14.50	3.44	3.28	0.40	7.12	.22	.13	706	732.1	234.0	95.9
15.00	3.70	3.03	0.37	7.10	.22	.13	709	732.0	229.6	96.4
15.50	3.92	2.73	0.34	6.99	.22	.14	708	732.0	225.0	96.8
16.00	4.19	2.50	0.30	6.99	.22	.14	709	731.9	220.1	97.2
16.50	4.44	2.23	0.27	6.94	.22	.14	706	731.7	215.0	97.5
17.00	4.69	2.00	0.24	6.93	.22	.14	707	731.6	209.6	97.7
17.50	4.95	1.73	0.21	6.90	.23	.14	706	731.4	203.9	97.9
18.00	5.21	1.47	0.17	6.86	.23	.15	703	731.1	198.1	97.9
18.50	5.48	1.24	0.14	6.86	.23	.15	700	730.8	192.2	97.9
38418.75	7.99	1.14	0.12	9.25	-17.10	-17.02	767	730.7	189.2	97.9
19.00	6.16	1.01	0.11	7.28	.21	.12	713	730.5	186.2	97.8
19.25	6.60	0.87	0.09	7.56	.19	.11	723	730.3	183.1	97.8
19.50	6.32	0.79	0.08	7.19	.21	.13	711	730.2	180.2	97.7
19.75	6.66	0.66	0.06	7.38	.20	.12	721	730.0	177.2	97.6
20.00	7.00	0.54	0.04	7.58	.19	.11	723	729.8	174.2	97.4
20.25	6.31	0.43	0.03	6.77	.24	.16	691	729.6	171.3	97.2
20.50	6.34	0.32	0.02	6.67	.24	.16	697	729.4	168.5	97.1
20.75	6.47	0.21	0.00	6.68	.24	.16	700	729.1	165.7	96.9
21.00	6.61	0.11	-0.02	6.69	.24	.16	699	728.9	162.9	96.6
21.25	6.74	0.00	-0.04	6.70	.24	.16	700	728.7	160.2	96.4
21.50	6.88	-0.11	-0.05	6.72	.23	.16	704	728.4	157.6	96.2
21.75	7.12	-0.21	-0.06	6.85	.22	.15	710	728.1	155.0	95.9
22.00	7.46	-0.32	-0.08	7.06	.21	.14	715	727.9	152.5	95.6
22.25	7.08	-0.42	0.00	7.07	.21	.14	714	727.6	150.1	95.3
22.50	7.36	-0.53	0.00	7.09	.21	.14	713	727.3	147.8	95.0
22.75	7.94	-0.63	0.00	7.21	.20	.13	717	727.0	145.5	94.6
23.00	8.12	-0.74	0.00	7.63	.18	.11	728	726.7	143.3	94.3
38423.20	9.17	-0.84	-0.15	8.18	-17.16	-17.08	739	726.5	141.6	94.0
23.40	9.55	-0.91	-0.16	8.48	.15	.07	745	726.3	139.9	93.7
23.60	9.78	-1.00	-0.18	8.60	.14	.06	748	726.0	138.3	93.4
23.80	9.52	-1.10	-0.19	8.23	.16	.08	738	725.8	136.7	93.1
24.00	9.10	-1.16	-0.20	7.75	.18	.10	726	725.5	135.1	92.8
24.20	8.85	-1.26	-0.22	7.37	.20	.13	717	725.2	133.6	92.5
24.40	7.95	-1.37	-0.23	6.35	.26	.19	683	725.0	132.1	92.2
24.60	7.70	-1.45	-0.24	6.01	.28	.21	672	724.7	130.6	91.9
24.80	7.77	-1.54	-0.25	5.98	.29	.22	669	724.4	129.2	91.5
25.00	7.85	-1.60	-0.26	5.99	.29	.22	671	724.1	127.8	91.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38425.20	8.08	-1.69	-0.28	6.11	-17.27	-17.21	679	723.8	126.5	90.9
38425.30	8.61	-1.73	-0.28	11.94	-16.98	-16.92	828	723.7	125.8	90.7
25.40	8.65	-1.79	-0.29	13.56	.92	.86	857	723.5	125.2	90.5
25.50	9.98	-1.81	-0.30	14.85	.88	.82	875	723.4	124.5	90.3
25.60	10.02	-1.87	-0.30	21.74	.72	.66	939	723.3	123.9	90.2
25.70	11.35	-1.90	-0.31	22.18	.73	.65	934	723.1	123.2	90.0
25.80	12.04	-1.94	-0.32	9.78	-17.09	-17.01	774	722.9	122.6	89.8
25.90	11.44	-2.00	-0.32	9.12	.12	.04	758	722.8	122.0	89.6
26.00	10.83	-2.02	-0.33	8.48	.15	.08	739	722.6	121.4	89.4
26.10	10.22	-2.07	-0.34	7.81	.19	.11	719	722.5	120.8	89.3
38426.25	9.10	-2.10	-0.34	6.66	-17.25	-17.18	685	722.3	119.9	89.0
26.50	8.79	-2.19	-0.36	6.24	.27	.20	681	721.9	118.4	88.5
26.75	8.79	-2.26	-0.38	6.15	.27	.21	683	721.5	117.0	88.1
27.00	8.70	-2.31	-0.39	5.99	.28	.22	672	721.1	115.6	87.6
27.25	8.81	-2.42	-0.40	5.99	.29	.23	666	720.7	114.3	87.1
27.50	8.92	-2.47	-0.42	6.03	.28	.22	673	720.2	112.9	86.7
27.75	9.04	-2.53	-0.44	6.06	.28	.22	676	719.8	111.7	86.2
28.00	9.26	-2.63	-0.45	6.18	.27	.21	686	719.4	110.4	85.7
28.25	9.27	-2.68	-0.47	6.12	.26	.21	691	719.0	109.2	85.2
28.50	9.50	-2.74	-0.48	6.27	.25	.20	697	718.5	108.0	84.7
28.75	9.51	-2.84	-0.50	6.18	.26	.21	693	718.1	106.8	84.2
29.00	9.84	-2.92	-0.52	6.40	.25	.20	700	717.6	105.6	83.7
29.25	9.97	-2.94	-0.53	6.49	.24	.19	700	717.2	104.5	83.2
29.50	9.89	-3.05	-0.54	6.30	.26	.21	682	716.7	103.4	82.7
29.75	10.01	-3.15	-0.56	6.30	.27	.21	675	716.3	102.3	82.2
30.00	9.83	-3.24	-0.57	6.02	.28	.23	674	715.8	101.2	81.7
30.25	9.75	-3.31	-0.59	5.85	.29	.24	672	715.3	100.2	81.2
30.50	9.98	-3.36	-0.60	6.02	.28	.23	679	714.9	99.2	80.7
30.75	11.15	-3.46	-0.61	7.08	.20	.16	719	714.4	98.2	80.2
31.00	11.49	-3.52	-0.63	7.34	.19	.15	722	713.9	97.2	79.7
31.25	13.28	-3.58	-0.64	9.05	.11	.07	760	713.4	96.2	79.1
31.50	13.82	-3.68	-0.65	9.49	.10	.05	768	712.9	95.2	78.6
31.75	13.03	-3.76	-0.66	8.60	.14	.09	748	712.4	94.3	78.1
32.00	12.75	-3.80	-0.68	8.26	.15	.11	742	711.9	93.3	77.6
32.25	11.64	-3.89	-0.69	7.06	.22	.18	706	711.4	92.4	77.1
32.50	11.46	-3.97	-0.70	6.79	.23	.20	697	710.9	91.5	76.5
32.75	11.39	-4.03	-0.71	6.66	.24	.20	694	710.4	90.6	76.0
33.00	11.94	-4.11	-0.72	7.11	.21	.18	711	709.9	89.7	75.5
33.25	12.39	-4.20	-0.73	7.46	.19	.16	721	709.4	88.8	74.9
33.50	12.94	-4.28	-0.74	7.92	.16	.13	739	708.9	88.0	74.4
33.75	13.60	-4.33	-0.75	8.52	.12	.10	757	708.4	87.1	73.9
34.00	15.29	-4.41	-0.76	10.11	.06	.03	786	707.9	86.2	73.3
34.25	14.29	-4.51	-0.77	9.01	.11	.08	759	707.4	85.4	72.8
34.50	13.29	-4.57	-0.78	7.93	.16	.14	734	706.9	84.6	72.3
34.75	13.11	-4.63	-0.78	7.70	.17	.15	730	706.3	83.8	71.7
35.00	13.04	-4.73	-0.79	7.52	.18	.16	725	705.8	82.9	71.2
35.25	12.97	-4.81	-0.80	7.36	.19	.17	721	705.3	82.1	70.7
35.50	12.90	-4.86	-0.81	7.24	.19	.18	721	704.8	81.4	70.1
35.75	13.04	-4.94	-0.81	7.29	.19	.17	725	704.2	80.6	69.6
36.00	13.28	-5.02	-0.82	7.44	.18	.17	727	703.7	79.8	69.0
36.25	13.42	-5.10	-0.82	7.50	.18	.17	730	703.2	79.0	68.5
36.50	13.66	-5.15	-0.83	7.68	.16	.15	739	702.7	78.2	67.9
36.75	13.59	-5.25	-0.84	7.49	.17	.16	736	702.1	77.5	67.4
37.00	13.72	-5.34	-0.85	7.53	.17	.16	737	701.6	76.7	66.9
37.25	13.96	-5.38	-0.86	7.72	.16	.15	740	701.1	76.0	66.3
37.50	14.30	-5.47	-0.86	7.98	.15	.15	740	700.5	75.2	65.8
37.75	14.54	-5.55	-0.87	8.12	.14	.14	741	700.0	74.5	65.2
38.00	14.88	-5.59	-0.88	8.41	.13	.13	749	699.5	73.8	64.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38438.25	15.73	-5.68	-0.88	9.18	-17.09	-17.09	766	699.0	73.0	64.1
38.50	18.89	-5.74	-0.89	12.26	-16.96	-16.97	818	698.4	72.3	63.6
38.75	17.75	-5.79	-0.90	11.06	-17.01	-17.02	801	697.9	71.6	63.0
39.00	16.62	-5.88	-0.90	9.85	.06	.07	780	697.4	70.9	62.5
39.25	17.06	-5.92	-0.91	10.24	.04	.05	788	696.9	70.2	61.9
39.50	16.28	-5.99	-0.91	9.37	.07	.09	772	696.4	69.5	61.4
39.75	16.02	-6.04	-0.92	9.06	.09	.10	766	695.8	68.8	60.8
40.00	16.09	-6.10	-0.92	9.07	.09	.10	766	695.3	68.1	60.3
40.25	16.06	-6.16	-0.93	8.97	.09	.11	765	694.8	67.4	59.7
40.50	16.05	-6.21	-0.93	8.91	.09	.11	764	694.3	66.7	59.2
40.75	15.84	-6.28	-0.94	8.62	.11	.13	757	693.8	66.0	58.6
41.00	16.06	-6.32	-0.94	8.81	.09	.12	762	693.3	65.3	58.1
41.25	15.98	-6.39	-0.94	8.65	.10	.13	760	692.8	64.6	57.5
41.50	16.01	-6.42	-0.94	8.65	.10	.13	760	692.3	64.0	56.9
41.75	16.16	-6.50	-0.94	8.72	.10	.13	760	691.8	63.3	56.4
42.00	16.21	-6.52	-0.94	8.75	.09	.13	762	691.3	62.6	55.8
42.25	16.37	-6.57	-0.94	8.86	.09	.12	764	690.8	62.0	55.3
42.50	16.44	-6.62	-0.94	8.88	.08	.12	764	690.3	61.3	54.7
42.75	16.72	-6.64	-0.94	9.14	.07	.11	769	689.8	60.6	54.2
43.00	16.70	-6.71	-0.94	9.05	.08	.12	767	689.4	60.0	53.6
43.25	16.58	-6.73	-0.94	8.91	.08	.12	765	688.9	59.3	53.1
43.50	16.67	-6.78	-0.94	8.96	.08	.12	767	688.4	58.7	52.5
43.75	16.57	-6.81	-0.94	8.82	.08	.13	763	688.0	58.0	51.9
44.00	16.77	-6.83	-0.94	9.00	.07	.12	767	687.5	57.4	51.4
44.25	16.88	-6.86	-0.93	9.09	.07	.12	769	687.0	56.7	50.8
44.50	16.79	-6.88	-0.93	8.98	.07	.12	768	686.6	56.1	50.3
44.75	16.91	-6.92	-0.93	9.06	.07	.12	770	686.1	55.5	49.7
45.00	16.71	-6.94	-0.92	8.86	.07	.13	766	685.7	54.8	49.1
45.25	16.11	-6.94	-0.92	8.25	.10	.16	753	685.3	54.2	48.6
45.50	16.54	-6.94	-0.92	8.69	.08	.14	761	684.8	53.5	48.0
38445.60	18.91	-6.94	-0.92	11.06	-16.98	-17.04	801	684.7	53.3	47.8
45.70	19.65	-6.94	-0.92	11.79	.95	.02	811	684.5	53.0	47.6
45.80	21.03	-6.95	-0.92	13.17	.90	-16.97	829	684.3	52.8	47.4
45.90	22.42	-6.95	-0.92	14.55	.85	.92	845	684.2	52.5	47.1
46.00	23.80	-6.95	-0.92	15.94	.80	.88	859	684.0	52.3	46.9
46.10	24.54	-6.95	-0.91	16.69	.78	.86	866	683.8	52.0	46.7
46.20	22.69	-6.95	-0.91	14.84	.83	.91	851	683.7	51.8	46.5
46.30	20.85	-6.95	-0.91	12.99	.89	.97	832	683.5	51.5	46.2
46.40	20.94	-6.95	-0.91	13.08	.89	.97	831	683.4	51.3	46.0
46.50	19.09	-6.94	-0.91	11.24	.96	-17.04	806	683.2	51.0	45.8
46.60	19.18	-6.94	-0.90	11.34	.96	.03	807	683.0	50.8	45.6
38446.75	19.24	-6.92	-0.90	11.42	-16.95	-17.03	807	682.8	50.4	45.2
47.00	19.26	-6.87	-0.90	11.49	.95	.03	808	682.4	49.8	44.7
47.25	19.38	-6.83	-0.90	11.65	.94	.02	809	682.0	49.2	44.1
47.50	19.60	-6.81	-0.89	11.90	.94	.02	812	681.6	48.6	43.5
47.75	19.82	-6.76	-0.88	12.18	.92	.01	816	681.3	47.9	43.0
48.00	20.04	-6.73	-0.88	12.43	.91	.00	820	680.9	47.3	42.4
48.25	20.15	-6.71	-0.87	12.57	.90	.00	821	680.5	46.7	41.9
48.50	20.15	-6.67	-0.87	12.61	.90	-16.99	821	680.2	46.1	41.3
48.75	19.73	-6.63	-0.86	12.24	.92	-17.01	817	679.8	45.5	40.7
49.00	19.62	-6.61	-0.86	12.15	.91	.01	817	679.5	44.9	40.2
49.25	19.92	-6.57	-0.85	12.50	.90	.00	820	679.2	44.3	39.6
49.50	20.20	-6.53	-0.84	12.84	.89	-16.99	824	678.8	43.7	39.0
49.75	20.69	-6.51	-0.83	13.36	.87	.97	831	678.5	43.1	38.5
50.00	21.48	-6.46	-0.82	14.20	.84	.95	840	678.2	42.5	37.9
50.25	24.85	-6.42	-0.82	17.61	.74	.85	869	677.9	41.9	37.4
50.50	25.53	-6.40	-0.81	18.32	.72	.84	875	677.6	41.3	36.8
50.75	26.40	-6.34	-0.80	19.26	.70	.81	883	677.3	40.7	36.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38451.00	27.15	-6.31	-0.79	20.06	-16.67	-16.79	891	677.1	40.1	35.7
51.25	26.04	-6.27	-0.78	18.98	.69	.81	884	676.8	39.5	35.1
51.50	24.81	-6.21	-0.77	17.83	.72	.84	874	676.5	38.9	34.5
51.75	25.12	-6.10	-0.76	18.26	.71	.83	877	676.3	38.3	34.0
52.00	25.31	-6.10	-0.76	18.46	.71	.83	876	676.0	37.7	33.4
52.25	25.50	-6.04	-0.74	18.72	.70	.83	878	675.8	37.1	32.8
52.50	25.57	-5.99	-0.74	18.84	.70	.83	879	675.6	36.5	32.3
52.75	25.83	-5.92	-0.72	19.19	.69	.82	880	675.4	35.9	31.7
53.00	26.39	-5.85	-0.72	19.81	.67	.80	887	675.1	35.3	31.1
53.25	26.52	-5.78	-0.70	20.04	.66	.80	889	674.9	34.7	30.6
53.50	26.22	-5.70	-0.69	19.83	.67	.80	888	674.7	34.1	30.0
53.75	26.01	-5.62	-0.68	19.71	.67	.80	886	674.5	33.5	29.4
54.00	25.89	-5.57	-0.67	19.65	.68	.81	883	674.4	33.0	28.9
54.25	24.61	-5.49	-0.66	18.46	.71	.84	873	674.2	32.4	28.3
54.50	22.80	-5.39	-0.64	16.77	.75	.88	861	674.0	31.8	27.7
54.75	22.11	-5.31	-0.63	16.17	.77	.90	855	673.9	31.2	27.2
55.00	21.20	-5.24	-0.62	15.33	.79	.92	847	673.7	30.6	26.6
55.25	19.96	-5.13	-0.60	14.23	.82	.96	837	673.6	30.0	26.0
55.50	19.83	-5.04	-0.59	14.20	.83	.96	834	673.5	29.5	25.5
55.75	19.90	-4.94	-0.58	14.38	.83	.96	835	673.3	28.9	24.9
56.00	20.15	-4.85	-0.56	14.74	.81	.94	838	673.2	28.3	24.3
56.25	19.96	-4.73	-0.55	14.68	.82	.95	936	673.1	27.7	23.8
56.50	19.55	-4.63	-0.54	14.38	.83	.96	833	673.0	27.1	23.2
56.75	18.91	-4.54	-0.52	13.85	.85	.97	827	672.9	26.6	22.6
57.00	17.84	-4.47	-0.51	12.86	.88	-17.01	817	672.9	26.0	22.1
57.25	16.22	-4.36	-0.50	11.36	.93	.06	800	672.8	25.4	21.5
57.50	16.68	-4.26	-0.48	11.94	.91	.04	808	672.7	24.8	20.9
57.75	18.18	-4.15	-0.47	13.56	.85	-16.98	825	672.7	24.3	20.3
58.00	19.37	-4.06	-0.46	14.85	.81	.94	838	672.6	23.7	19.8
58.25	26.13	-3.95	-0.44	21.74	.63	.77	893	672.6	23.1	19.2
58.50	26.48	-3.88	-0.42	22.18	.61	.76	898	672.6	22.5	18.6
58.75	29.62	-3.75	-0.41	25.46	.55	.70	916	672.5	22.0	18.1
59.00	32.03	-3.66	-0.40	27.97	.51	.66	929	672.5	21.4	17.5
59.25	26.57	-3.55	-0.38	22.64	.60	.75	900	672.5	20.8	17.0
59.50	24.42	-3.46	-0.37	20.59	.65	.80	885	672.5	20.2	16.4
59.75	24.23	-3.35	-0.35	20.53	.66	.80	883	672.5	19.7	15.8
60.00	23.93	-3.26	-0.34	20.33	.66	.80	883	672.6	19.1	15.3
60.25	22.80	-3.17	-0.32	19.31	.68	.83	876	672.6	18.5	14.7
60.50	20.22	-3.07	-0.30	16.85	.75	.89	855	672.6	18.0	14.1
60.75	18.05	-3.00	-0.28	14.77	.81	.95	837	672.7	17.4	13.6
61.00	17.43	-2.90	-0.27	14.26	.83	.97	831	672.7	16.8	13.0
61.25	17.21	-2.79	-0.25	14.18	.83	.97	830	672.8	16.2	12.4
61.50	17.10	-2.68	-0.24	14.18	.83	.97	829	672.8	15.7	11.9
61.75	17.60	-2.54	-0.22	14.84	.82	.95	834	672.9	15.1	11.3
62.00	19.76	-2.44	-0.20	17.12	.75	.89	854	673.0	14.5	10.7
62.25	21.39	-2.34	-0.18	18.87	.70	.85	867	673.1	14.0	10.2
62.50	20.44	-2.22	-0.16	18.06	.72	.86	862	673.2	13.4	9.6
62.75	19.07	-2.10	-0.15	16.82	.76	.90	851	673.3	12.8	9.0
63.00	16.67	-2.00	-0.14	14.53	.82	.96	832	673.4	12.3	8.5
63.25	15.61	-1.88	-0.11	13.62	.85	.99	824	673.5	11.7	7.9
63.50	14.75	-1.78	-0.10	12.87	.88	-17.01	816	673.7	11.1	7.3
63.75	14.20	-1.63	-0.08	12.49	.90	.03	808	673.8	10.6	6.8
64.00	13.96	-1.52	-0.06	12.38	.91	.03	804	674.0	10.0	6.2
64.25	13.62	-1.39	-0.04	12.19	.92	.04	801	674.1	9.4	5.6
64.50	13.17	-1.26	-0.02	11.89	.93	.05	798	674.3	8.9	5.0
64.75	12.51	-1.15	0.00	11.37	.95	.07	792	674.4	8.3	4.5
65.00	12.06	-1.04	0.02	11.04	.96	.08	788	674.6	7.7	3.9
65.25	11.71	-0.89	0.04	10.86	.97	.09	786	674.8	7.2	3.3

Table 3 (cont.)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38472.75	7.32	2.64	0.56	10.52	-17.02	-17.10	774	683.6	350.1	-13.8
73.00	7.15	2.74	0.58	10.47	.03	.10	773	684.0	349.5	-14.4
73.25	7.17	2.87	0.60	10.64	.02	.09	775	684.4	349.0	-15.0
73.50	6.97	2.96	0.62	10.55	.03	.09	773	684.8	348.4	-15.6
73.75	7.07	3.10	0.63	10.80	.02	.08	777	685.2	347.8	-16.1
74.00	7.15	3.17	0.64	10.97	.01	.07	779	685.6	347.2	-16.7
74.25	7.02	3.26	0.66	10.94	.02	.08	778	686.0	346.7	-17.3
74.50	7.08	3.36	0.67	11.11	.01	.07	780	686.5	346.1	-17.9
74.75	6.82	3.47	0.68	10.97	.02	.08	778	686.9	345.5	-18.5
75.00	6.75	3.57	0.70	11.03	.02	.07	779	687.3	344.9	-19.0
75.25	6.89	3.67	0.72	11.27	.01	.06	783	687.8	344.3	-19.6
75.50	7.01	3.76	0.73	11.50	.00	.05	785	688.2	343.8	-20.2
75.75	6.81	3.86	0.74	11.41	.01	.05	783	688.7	343.2	-20.8
76.00	6.91	3.94	0.76	11.61	.00	.05	786	689.2	342.6	-21.3
76.25	6.80	4.05	0.77	11.62	.00	.05	786	689.6	342.0	-21.9
38476.60	7.89	4.15	0.79	12.83	-16.96	-17.00	800	690.3	341.2	-22.7
76.80	10.85	4.24	0.79	15.88	.86	-16.91	832	690.7	340.7	-23.2
77.00	14.30	4.31	0.81	19.41	.77	.82	863	691.1	340.3	-23.7
77.20	11.12	4.40	0.82	16.34	.85	.89	838	691.5	339.8	-24.1
77.40	8.42	4.47	0.83	13.72	.93	.97	813	691.8	339.3	-24.6
77.60	9.27	4.53	0.84	14.64	.90	.94	824	692.2	338.9	-25.0
77.80	12.05	4.62	0.85	17.53	.82	.86	848	692.6	338.4	-25.5
78.00	7.57	4.68	0.86	13.11	.95	.99	806	693.0	337.9	-26.0
78.20	7.12	4.76	0.87	12.75	.97	-17.00	800	693.4	337.5	-26.4
78.40	6.18	4.85	0.88	11.91	-17.00	.03	790	693.8	337.0	-26.9
78.60	8.31	4.93	0.89	14.13	-16.92	-16.95	816	694.3	336.5	-27.4
78.80	9.47	4.99	0.90	15.36	.89	.91	828	694.7	336.0	-27.8
79.00	6.42	5.06	0.91	12.39	.99	-17.01	796	695.1	335.6	-28.3
79.20	5.32	5.15	0.92	11.39	-17.02	.04	782	695.5	335.1	-28.7
79.40	4.21	5.24	0.93	10.38	.06	.08	768	695.9	334.6	-29.2
79.60	4.55	5.28	0.94	10.77	.05	.07	773	696.3	334.2	-29.7
79.80	7.15	5.37	0.94	13.47	-16.95	-16.97	807	696.7	333.7	-30.1
80.00	7.82	5.44	0.95	14.21	.93	.94	815	697.2	333.2	-30.6
80.20	6.87	5.52	0.96	13.35	.96	.97	806	697.6	332.7	-31.1
80.40	5.44	5.57	0.97	11.98	-17.01	-17.02	789	698.0	332.2	-31.5
80.60	4.33	5.65	0.98	10.96	.05	.05	775	698.5	331.8	-32.0
80.80	3.54	5.71	0.98	10.23	.08	.08	764	698.9	331.3	-32.4
38481.00	2.62	5.78	0.99	9.39	-17.11	-17.12	751	699.3	330.8	-32.9
81.25	2.34	5.86	1.00	9.21	.12	.12	750	699.9	330.2	-33.5
81.50	2.07	5.94	1.01	9.02	.13	.13	747	700.4	329.6	-34.1
81.75	1.79	6.01	1.02	8.83	.14	.13	744	701.0	329.0	-34.6
82.00	1.52	6.10	1.03	8.65	.15	.14	741	701.5	328.4	-35.2
82.25	1.46	6.18	1.04	8.68	.14	.14	743	702.1	327.8	-35.8
82.50	1.41	6.24	1.04	8.69	.14	.13	745	702.6	327.2	-36.4
82.75	1.35	6.32	1.05	8.72	.14	.13	746	703.2	326.6	-37.0
83.00	1.31	6.40	1.06	8.77	.14	.13	748	703.7	326.0	-37.5
83.25	1.26	6.46	1.06	8.79	.14	.12	749	704.3	325.3	-38.1
83.50	1.12	6.52	1.07	8.71	.14	.13	747	704.9	324.7	-38.7
83.75	1.09	6.60	1.08	8.77	.14	.13	745	705.4	324.1	-39.3
84.00	1.69	6.64	1.08	9.41	.12	.10	752	706.0	323.5	-39.8
84.25	1.88	6.71	1.08	9.67	.11	.09	753	706.5	322.9	-40.4
84.50	1.87	6.78	1.09	9.74	.11	.08	752	707.1	322.3	-41.0
84.75	3.84	6.83	1.10	11.77	.03	.00	785	707.7	321.6	-41.6
85.00	7.36	6.88	1.10	15.34	-16.92	-16.88	828	708.2	321.0	-42.1
85.25	4.17	6.94	1.10	12.21	-17.01	.98	798	708.8	320.4	-42.7
85.50	1.62	6.99	1.10	9.71	.10	-17.07	765	709.4	319.7	-43.3
85.75	1.55	7.04	1.10	9.70	.10	.07	765	709.9	319.1	-43.9
86.00	1.29	7.09	1.11	9.50	.11	.08	760	710.5	318.5	-44.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38486.25	1.25	7.15	1.11	9.51	-17.11	-17.08	761	711.1	317.8	-45.0
86.50	1.53	7.18	1.11	9.82	.10	.06	768	711.6	317.2	-45.6
38486.70	2.03	7.23	1.12	10.38	-17.08	-17.04	774	712.1	316.7	-46.0
86.80	2.67	7.24	1.12	11.03	.06	.02	778	712.3	316.4	-46.3
86.90	6.54	7.25	1.12	14.91	-16.94	-16.88	824	712.5	316.2	-46.5
87.00	13.00	7.26	1.12	21.38	.78	.72	880	712.7	315.9	-46.7
87.10	16.87	7.27	1.12	25.27	.71	.64	906	713.0	315.7	-46.9
87.20	14.29	7.28	1.12	22.70	.75	.69	891	713.2	315.4	-47.2
87.30	13.01	7.30	1.12	21.43	.78	.72	880	713.4	315.1	-47.4
87.40	9.79	7.34	1.12	18.24	.85	.79	856	713.6	314.9	-47.6
87.50	7.21	7.35	1.12	15.68	.92	.86	834	713.8	314.6	-47.9
87.60	4.64	7.36	1.12	13.12	.99	.94	806	714.1	314.4	-48.1
38487.80	2.58	7.38	1.12	11.08	-17.06	-17.01	778	714.5	313.8	-48.5
88.00	5.20	7.40	1.12	13.72	-16.97	-16.92	813	715.0	313.3	-49.0
88.20	4.44	7.41	1.12	12.97	-17.00	.94	804	715.4	312.8	-49.4
88.40	1.92	7.44	1.12	10.48	.09	-17.03	766	715.8	312.3	-49.9
38488.75	1.03	7.45	1.12	9.60	-17.13	-17.07	751	716.6	311.3	-50.7
89.00	0.73	7.45	1.12	9.30	.14	.08	744	717.2	310.7	-51.3
89.25	1.38	7.45	1.12	9.95	.11	.05	758	717.7	310.0	-51.8
89.50	1.18	7.45	1.12	9.75	.12	.06	756	718.2	309.4	-52.3
89.75	0.98	7.44	1.12	9.54	.12	.06	756	718.8	308.7	-52.9
90.00	0.89	7.44	1.12	9.45	.12	.06	756	719.3	308.0	-53.5
90.25	1.00	7.41	1.12	9.53	.12	.06	755	719.8	307.3	-54.0
90.50	1.12	7.39	1.12	9.63	.12	.05	757	720.4	306.6	-54.6
90.75	1.24	7.36	1.12	9.72	.11	.05	762	720.9	305.9	-55.2
91.00	1.16	7.35	1.12	9.63	.12	.05	758	721.4	305.2	-55.7
91.25	1.18	7.30	1.11	9.60	.12	.05	755	721.9	304.5	-56.3
91.50	1.21	7.26	1.11	9.58	.12	.05	761	722.4	303.8	-56.9
91.75	0.92	7.26	1.11	9.30	.12	.06	761	722.9	303.1	-57.4
92.00	0.75	7.25	1.10	9.10	.14	.07	754	723.4	302.4	-58.0
92.25	0.47	7.24	1.10	8.81	.16	.08	740	724.0	301.7	-58.6
92.50	0.51	7.20	1.10	8.81	.16	.08	740	724.4	300.9	-59.1
92.75	0.65	7.17	1.10	8.92	.15	.07	744	724.9	300.2	-59.7
38493.00	0.57	7.15	1.09	8.81	-17.16	-17.08	741	725.4	299.5	-60.2
93.50	0.82	7.05	1.08	8.95	.15	.07	741	726.4	298.0	-61.4
94.00	0.73	6.96	1.07	8.76	.16	.08	736	727.3	296.4	-62.5
94.50	0.63	6.84	1.05	8.52	.17	.08	734	728.3	294.9	-63.6
95.00	0.49	6.73	1.04	8.25	.17	.09	735	729.2	293.3	-64.7
95.50	0.50	6.61	1.02	8.13	.18	.10	733	730.1	291.7	-65.8
96.00	0.65	6.43	1.00	8.08	.18	.10	732	730.9	290.0	-66.9
96.50	0.75	6.31	0.98	8.04	.19	.10	726	731.8	288.4	-68.0
97.00	0.71	6.12	0.96	7.79	.20	.11	713	732.6	286.6	-69.1
97.50	0.70	5.98	0.94	7.62	.21	.12	718	733.4	284.8	-70.2
98.00	0.76	5.78	0.92	7.46	.21	.12	713	734.2	283.0	-71.3
98.50	0.94	5.60	0.89	7.43	.22	.12	712	734.9	281.1	-72.4
99.00	1.10	5.45	0.87	7.43	.21	.12	712	735.7	279.2	-73.4
99.50	1.18	5.25	0.85	7.28	.22	.13	706	736.4	277.2	-74.5
38500.00	1.18	5.04	0.82	7.05	.24	.14	700	737.1	275.1	-75.6
00.50	1.29	4.83	0.81	6.93	.24	.14	693	737.7	272.9	-76.6
01.00	1.50	4.62	0.79	6.91	.25	.14	683	738.3	270.7	-77.7
38501.25	1.59	4.52	0.78	6.89	-17.25	-17.14	680	738.6	269.5	-78.2
01.50	1.81	4.41	0.76	6.99	.24	.14	685	738.9	268.3	-78.7
01.75	2.05	4.31	0.76	7.12	.23	.13	693	739.2	267.1	-79.2
02.00	2.91	4.20	0.74	7.85	.19	.08	720	739.5	265.9	-79.7
02.25	4.19	4.10	0.73	9.02	.13	.02	749	739.8	264.6	-80.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (kn)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38502.50	2.79	3.99	0.72	7.51	-17.22	-17.10	694	740.1	263.3	-80.7
02.75	2.02	3.95	0.70	6.68	.26	.15	665	740.3	261.9	-81.2
03.00	1.99	3.78	0.69	6.46	.27	.16	663	740.6	260.5	-81.7
03.25	2.37	3.68	0.68	6.73	.25	.15	684	740.8	259.1	-82.2
03.50	3.48	3.57	0.66	7.72	.19	.09	717	741.1	257.7	-82.6
03.75	6.47	3.47	0.65	10.58	.07	-16.95	778	741.3	256.2	-83.1
04.00	5.32	3.36	0.64	9.33	.12	-17.00	745	741.5	254.6	-83.6
04.25	4.23	3.26	0.62	8.11	.18	.06	714	741.8	253.0	-84.0
04.50	4.02	3.15	0.60	7.77	.20	.08	704	742.0	251.4	-84.5
04.75	3.91	3.04	0.59	7.54	.21	.09	696	742.2	249.7	-84.9
05.00	3.59	2.93	0.58	7.11	.24	.11	676	742.4	248.0	-85.4
05.25	3.28	2.83	0.56	6.67	.26	.14	660	742.6	246.2	-85.8
05.50	3.38	2.72	0.54	6.64	.26	.14	664	742.8	244.3	-86.2
05.75	3.79	2.62	0.53	6.94	.24	.12	683	743.0	242.4	-86.7
06.00	4.10	2.52	0.52	7.14	.23	.11	689	743.1	240.5	-87.1
06.25	4.41	2.42	0.50	7.32	.22	.10	691	743.3	238.4	-87.5
06.50	4.51	2.31	0.48	7.30	.22	.10	698	743.5	236.3	-87.8
06.75	4.30	2.21	0.47	6.98	.23	.12	691	743.6	234.1	-88.2
07.00	4.30	2.10	0.46	6.86	.24	.13	684	743.8	231.9	-88.6
07.25	4.30	2.02	0.44	6.76	.25	.13	684	743.9	229.6	-88.9
07.50	4.10	1.91	0.42	6.43	.27	.15	676	744.0	227.2	-89.3
07.75	4.20	1.82	0.41	6.43	.27	.15	676	744.2	224.7	-89.6
08.00	4.41	1.73	0.39	6.54	.26	.15	680	744.3	222.2	-89.9
08.25	4.31	1.63	0.38	6.32	.27	.16	669	744.4	219.6	-90.2
08.50	4.52	1.56	0.36	6.44	.27	.15	673	744.5	216.9	-90.4
08.75	4.73	1.45	0.34	6.52	.26	.15	678	744.6	214.2	-90.7
09.00	4.94	1.37	0.33	6.64	.25	.14	682	744.7	211.4	-90.9
09.25	4.94	1.27	0.31	6.53	.26	.14	678	744.7	208.6	-91.1
09.50	5.16	1.23	0.30	6.68	.25	.13	683	744.8	205.7	-91.3
09.75	5.37	1.15	0.28	6.79	.24	.13	686	744.9	202.7	-91.5
10.00	5.37	1.07	0.26	6.70	.25	.13	681	744.9	199.8	-91.7
10.25	5.68	1.04	0.25	6.97	.23	.11	690	745.0	196.7	-91.8
10.50	5.58	0.96	0.23	6.77	.24	.13	679	745.0	193.7	-91.9
10.75	5.59	0.91	0.21	6.71	.25	.13	670	745.0	190.7	-92.0
11.00	5.80	0.84	0.20	6.84	.24	.12	673	745.1	187.7	-92.0
11.25	6.01	0.79	0.18	6.98	.23	.11	677	745.1	184.7	-92.1
11.50	5.70	0.74	0.16	6.60	.26	.13	659	745.1	181.7	-92.1
11.75	5.91	0.68	0.15	6.74	.25	.13	675	745.1	178.7	-92.1
12.00	6.22	0.63	0.14	6.99	.23	.11	688	745.1	175.8	-92.1
12.25	6.54	0.56	0.12	7.21	.22	.10	693	745.1	172.9	-92.0
12.50	6.85	0.51	0.10	7.46	.20	.08	697	745.1	170.1	-92.0
12.75	7.26	0.44	0.09	7.79	.19	.06	702	745.0	167.3	-91.9
13.00	7.88	0.39	0.08	8.35	.16	.03	710	745.0	164.6	-91.8
13.25	8.81	0.32	0.07	9.20	.12	-16.99	732	744.9	162.0	-91.7
13.50	9.12	0.28	0.04	9.45	.11	.98	739	744.9	159.4	-91.5
13.75	8.50	0.21	0.02	8.73	.14	-17.01	727	744.8	156.9	-91.4
14.00	8.50	0.16	0.00	8.66	.14	.02	731	744.8	154.5	-91.2
14.25	7.99	0.09	-0.01	8.07	.17	.05	708	744.7	152.1	-91.0
14.50	7.88	0.02	-0.03	7.87	.18	.06	706	744.6	149.8	-90.8
14.75	7.67	-0.02	-0.04	7.61	.19	.07	705	744.5	147.6	-90.6
15.00	7.67	-0.11	-0.06	7.50	.20	.08	700	744.4	145.5	-90.4
15.25	7.25	-0.19	-0.07	6.99	.23	.11	688	744.3	143.4	-90.2
15.50	6.83	-0.22	-0.08	6.53	.25	.14	676	744.2	141.4	-89.9
15.75	6.93	-0.29	-0.10	6.53	.25	.14	673	744.1	139.4	-89.7
16.00	8.67	-0.33	-0.12	8.23	.16	.04	721	743.9	137.6	-89.4
16.25	9.59	-0.40	-0.14	9.06	.12	.00	734	743.8	135.7	-89.2
16.50	9.38	-0.44	-0.15	8.79	.14	.01	727	743.6	133.9	-88.9
16.75	8.85	-0.53	-0.16	8.17	.16	.04	716	743.5	132.2	-88.6
17.00	8.84	-0.59	-0.18	8.07	.16	.05	718	743.3	130.6	-88.3
17.25	8.72	-0.65	-0.20	7.87	.17	.06	713	743.2	128.9	-88.0

Tablé 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38517.50	8.61	-0.74	-0.22	7.65	-17.19	-17.07	702	743.0	127.4	-87.7
17.75	8.59	-0.82	-0.23	7.54	.19	.08	701	742.8	125.8	-87.4
18.00	8.57	-0.88	-0.24	7.45	.20	.08	703	742.6	124.4	-87.1
18.25	8.66	-0.98	-0.26	7.42	.20	.09	701	742.4	122.9	-86.7
18.50	8.64	-1.05	-0.28	7.31	.20	.09	699	742.2	121.5	-86.4
18.75	8.72	-1.16	-0.29	7.27	.20	.10	701	742.0	120.1	-86.1
19.00	8.70	-1.25	-0.31	7.14	.21	.10	697	741.8	118.8	-85.7
19.25	8.67	-1.35	-0.32	7.01	.22	.11	692	741.5	117.5	-85.4
19.50	8.96	-1.42	-0.34	7.20	.21	.10	699	741.3	116.2	-85.1
19.75	9.03	-1.52	-0.36	7.15	.21	.10	698	741.0	115.0	-84.7
20.00	9.21	-1.63	-0.37	7.21	.21	.10	700	740.8	113.8	-84.4
20.25	9.39	-1.71	-0.39	7.28	.20	.10	698	740.5	112.6	-84.0
20.50	9.46	-1.80	-0.40	7.26	.21	.10	691	740.3	111.4	-83.6
20.75	9.53	-1.90	-0.42	7.20	.21	.10	690	740.0	110.3	-83.3
21.00	9.65	-2.00	-0.44	7.21	.21	.10	698	739.7	109.2	-82.9
21.25	9.82	-2.10	-0.45	7.27	.20	.10	704	739.4	108.1	-82.6
21.50	9.89	-2.21	-0.47	7.21	.20	.10	702	739.1	107.0	-82.2
21.75	10.06	-2.31	-0.49	7.26	.20	.10	701	738.8	106.0	-81.8
22.00	10.23	-2.42	-0.50	7.31	.20	.10	702	738.5	104.9	-81.4
22.25	10.40	-2.52	-0.52	7.36	.20	.09	704	738.2	103.9	-81.1
22.50	10.47	-2.63	-0.54	7.30	.20	.10	703	737.9	102.9	-80.7
22.75	10.64	-2.73	-0.55	7.36	.20	.10	707	737.6	101.9	-80.3
23.00	10.71	-2.84	-0.56	7.31	.20	.10	707	737.2	101.0	-79.9
23.25	10.88	-2.94	-0.58	7.36	.19	.10	710	736.9	100.0	-79.5
23.50	10.95	-3.05	-0.60	7.30	.20	.10	708	736.6	99.1	-79.1
23.75	11.12	-3.15	-0.62	7.34	.19	.10	709	736.2	98.2	-78.8
24.00	11.18	-3.26	-0.63	7.29	.20	.10	708	735.9	97.2	-78.4
24.25	11.14	-3.36	-0.64	7.14	.21	.11	703	735.5	96.3	-78.0
24.50	10.90	-3.47	-0.66	6.77	.23	.14	691	735.1	95.4	-77.6
24.75	11.06	-3.56	-0.68	6.82	.23	.13	692	734.8	94.6	-77.2
25.00	11.33	-3.67	-0.69	6.97	.22	.13	697	734.4	93.7	-76.8
25.25	12.11	-3.77	-0.71	7.63	.18	.09	715	734.0	92.8	-76.4
25.50	12.58	-3.88	-0.72	7.98	.17	.07	720	733.6	92.0	-76.0
25.75	14.18	-3.97	-0.74	9.47	.10	.00	757	733.3	91.1	-75.6
38525.80	14.37	-3.99	-0.74	9.64	-17.09	-16.99	762	733.2	91.0	-75.5
25.90	15.08	-4.01	-0.75	10.31	.07	.96	771	733.0	90.6	-75.3
26.00	15.79	-4.08	-0.76	10.95	.04	.94	782	732.9	90.3	-75.2
26.10	21.01	-4.10	-0.76	16.15	-16.88	.77	859	732.7	90.0	-75.0
26.20	19.78	-4.15	-0.77	14.86	.92	.81	843	732.5	89.7	-74.9
26.30	19.20	-4.19	-0.78	14.22	.94	.83	833	732.4	89.3	-74.7
26.40	16.68	-4.23	-0.78	11.67	-17.02	.91	792	732.2	89.0	-74.5
26.50	15.45	-4.26	-0.79	10.40	.07	.96	768	732.1	88.7	-74.4
26.60	14.86	-4.31	-0.80	9.75	.09	.99	760	731.9	88.4	-74.2
26.70	14.28	-4.33	-0.80	9.15	.10	-17.01	755	731.7	88.0	-74.0
38526.75	14.07	-4.36	-0.80	8.91	-17.12	-17.03	748	731.7	87.9	-74.0
27.00	13.81	-4.45	-0.82	8.54	.13	.04	743	731.2	87.1	-73.6
27.25	13.23	-4.54	-0.83	7.86	.17	.08	725	730.8	86.3	-73.2
27.50	13.06	-4.63	-0.84	7.58	.18	.10	717	730.4	85.5	-72.7
27.75	13.09	-4.73	-0.86	7.51	.18	.10	717	730.0	84.7	-72.3
28.00	12.92	-4.86	-0.87	7.19	.20	.12	710	729.6	83.9	-71.9
28.25	13.05	-4.96	-0.88	7.21	.20	.12	711	729.1	83.2	-71.5
28.50	13.39	-5.06	-0.90	7.43	.19	.11	716	728.7	82.4	-71.1
28.75	13.92	-5.16	-0.90	7.86	.18	.09	718	728.3	81.7	-70.7
29.00	15.39	-5.27	-0.92	9.20	.12	.03	745	727.8	80.9	-70.3
29.25	15.92	-5.37	-0.93	9.62	.09	.01	760	727.4	80.2	-69.9
29.50	15.62	-5.48	-0.94	9.20	.11	.03	753	727.0	79.4	-69.4
29.75	15.62	-5.58	-0.96	9.08	.13	.04	741	726.5	78.7	-69.0
30.00	16.24	-5.68	-0.97	9.60	.10	.01	755	726.1	78.0	-68.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38530.25	16.65	-5.78	-0.98	9.89	-17.09	-17.00	765	725.6	77.2	-68.2
30.50	16.54	-5.88	-0.99	9.68	.10	.01	758	725.2	76.5	-67.8
30.75	16.53	-5.98	-1.00	9.55	.10	.02	759	724.7	75.8	-67.4
31.00	16.20	-6.07	-1.02	9.11	.12	.04	752	724.3	75.1	-66.9
31.25	16.18	-6.15	-1.03	9.00	.13	.05	746	723.8	74.4	-66.5
31.50	15.95	-6.23	-1.04	8.67	.15	.07	735	723.3	73.7	-66.1
31.75	16.02	-6.33	-1.05	8.64	.14	.07	737	722.9	73.0	-65.7
32.00	16.08	-6.41	-1.06	8.61	.14	.07	740	722.4	72.3	-65.3
32.25	16.04	-6.51	-1.08	8.45	.15	.08	741	722.0	71.6	-64.8
32.50	16.09	-6.57	-1.09	8.43	.14	.08	742	721.5	70.9	-64.4
32.75	15.93	-6.63	-1.10	8.20	.16	.09	733	721.1	70.2	-64.0
33.00	15.87	-6.72	-1.11	8.04	.17	.10	732	720.6	69.5	-63.6
33.25	15.70	-6.77	-1.12	7.81	.18	.11	729	720.1	68.9	-63.1
33.50	15.62	-6.83	-1.13	7.66	.18	.12	724	719.7	68.2	-62.7
33.75	15.75	-6.85	-1.14	7.75	.18	.12	727	719.2	67.5	-62.3
34.00	15.66	-6.92	-1.15	7.59	.18	.13	728	718.7	66.8	-61.9
34.25	15.67	-6.95	-1.16	7.56	.19	.13	727	718.3	66.2	-61.4
34.50	15.67	-6.97	-1.17	7.53	.19	.13	725	717.8	65.5	-61.0
34.75	15.58	-7.01	-1.18	7.39	.20	.14	723	717.4	64.8	-60.6
35.00	15.47	-7.04	-1.19	7.24	.21	.15	718	716.9	64.2	-60.2
35.25	15.56	-7.09	-1.20	7.27	.20	.15	720	716.4	63.5	-59.7
35.50	15.34	-7.13	-1.21	7.00	.22	.17	714	716.0	62.9	-59.3
35.75	15.00	-7.16	-1.22	6.62	.24	.20	700	715.5	62.2	-58.9
36.00	14.97	-7.18	-1.23	6.56	.25	.20	699	715.1	61.6	-58.4
36.25	15.04	-7.23	-1.23	6.58	.24	.20	702	714.6	60.9	-58.0
36.50	15.10	-7.25	-1.24	6.61	.24	.20	701	714.2	60.3	-57.6
36.75	14.74	-7.27	-1.25	6.22	.28	.23	683	713.7	59.6	-57.1
37.00	15.10	-7.30	-1.25	6.55	.25	.21	696	713.3	59.0	-56.7
37.25	15.35	-7.33	-1.26	6.77	.24	.20	708	712.8	58.3	-56.3
37.50	15.70	-7.35	-1.26	7.10	.21	.18	720	712.4	57.7	-55.9
37.75	15.95	-7.36	-1.27	7.32	.20	.17	727	711.9	57.0	-55.4
38.00	15.98	-7.37	-1.28	7.33	.20	.17	728	711.5	56.4	-55.0
38.25	16.00	-7.38	-1.28	7.34	.20	.17	727	711.0	55.8	-54.6
38.50	16.13	-7.41	-1.29	7.43	.20	.16	731	710.6	55.1	-54.1
38.75	16.55	-7.43	-1.29	7.83	.17	.14	744	710.2	54.5	-53.7
39.00	18.01	-7.43	-1.29	9.29	.10	.07	777	709.7	53.9	-53.3
39.25	18.22	-7.46	-1.30	9.46	.11	.07	775	709.3	53.2	-52.8
39.50	16.88	-7.47	-1.30	8.11	.18	.14	743	708.9	52.6	-52.4
39.75	16.98	-7.47	-1.30	8.21	.17	.14	747	708.5	52.0	-52.0
40.00	16.98	-7.48	-1.31	8.18	.17	.14	748	708.0	51.3	-51.5
40.25	18.41	-7.51	-1.31	9.58	.10	.07	781	707.6	50.7	-51.1
40.50	20.04	-7.51	-1.32	11.21	.03	.01	808	707.2	50.1	-50.6
40.75	20.64	-7.51	-1.32	11.81	.01	-16.98	818	706.8	49.5	-50.2
41.00	18.25	-7.51	-1.32	9.41	.11	-17.08	778	706.4	48.9	-49.8
41.25	17.19	-7.51	-1.32	8.35	.16	.14	756	706.0	48.2	-49.3
41.50	16.95	-7.48	-1.33	8.14	.17	.15	754	705.6	47.6	-48.9
41.75	17.12	-7.46	-1.33	8.33	.15	.14	761	705.2	47.0	-48.5
42.00	17.39	-7.46	-1.33	8.60	.14	.12	767	704.8	46.4	-48.0
42.25	17.55	-7.45	-1.33	8.77	.13	.12	771	704.4	45.8	-47.6
42.50	18.23	-7.41	-1.34	9.48	.11	.09	784	704.1	45.1	-47.2
42.75	18.08	-7.38	-1.34	9.36	.11	.10	782	703.7	44.5	-46.7
43.00	17.71	-7.36	-1.34	9.02	.13	.11	776	703.3	43.9	-46.3
43.25	17.24	-7.35	-1.34	8.56	.15	.14	768	702.9	43.3	-45.8
43.50	16.98	-7.27	-1.34	8.36	.16	.15	764	702.6	42.7	-45.4
43.75	16.71	-7.25	-1.34	8.12	.17	.16	759	702.2	42.1	-45.0
44.00	16.54	-7.23	-1.34	7.97	.18	.17	756	701.9	41.5	-44.5
44.25	16.06	-7.17	-1.34	7.55	.20	.20	747	701.5	40.8	-44.1
44.50	15.98	-7.15	-1.34	7.50	.21	.20	747	701.2	40.2	-43.6
44.75	16.01	-7.09	-1.34	7.58	.20	.20	751	700.8	39.6	-43.2
45.00	15.83	-7.04	-1.34	7.45	.21	.21	748	700.5	39.0	-42.8

Table 3 (cont.)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38545.25	15.54	-7.03	-1.34	7.17	-17.23	-17.23	741	700.2	38.4	-42.3
45.50	15.56	-6.96	-1.33	7.28	.22	.22	745	699.9	37.8	-41.9
45.75	15.58	-6.93	-1.33	7.33	.22	.22	746	699.5	37.2	-41.4
46.00	15.80	-6.85	-1.32	7.63	.20	.21	754	699.2	36.6	-41.0
46.25	15.71	-6.83	-1.32	7.56	.21	.21	753	698.9	36.0	-40.5
46.50	15.41	-6.78	-1.32	7.31	.22	.23	748	698.6	35.4	-40.1
46.75	15.11	-6.73	-1.32	7.07	.23	.24	743	698.3	34.8	-39.7
47.00	14.91	-6.65	-1.31	6.95	.24	.25	741	698.1	34.2	-39.2
47.25	14.71	-6.62	-1.31	6.78	.25	.26	737	697.8	33.6	-38.8
47.50	14.61	-6.54	-1.30	6.77	.25	.26	736	697.5	33.0	-38.3
47.75	14.30	-6.51	-1.30	6.49	.28	.29	728	697.2	32.4	-37.9
48.00	13.89	-6.43	-1.30	6.15	.30	.31	718	697.0	31.8	-37.4
48.25	13.99	-6.40	-1.29	6.29	.29	.30	724	696.7	31.2	-37.0
48.50	13.98	-6.32	-1.29	6.37	.28	.30	727	696.5	30.6	-36.5
48.75	13.87	-6.26	-1.28	6.33	.29	.30	726	696.2	30.0	-36.1
49.00	13.66	-6.20	-1.28	6.18	.30	.32	722	696.0	29.4	-35.6
49.25	13.75	-6.13	-1.28	6.34	.29	.31	728	695.8	28.8	-35.2
49.50	13.74	-6.09	-1.27	6.38	.29	.30	730	695.6	28.2	-34.7
49.75	13.73	-5.99	-1.26	6.48	.28	.30	734	695.4	27.6	-34.3
50.00	13.61	-5.94	-1.26	6.41	.29	.30	733	695.1	27.0	-33.9
50.25	13.70	-5.86	-1.25	6.59	.28	.30	739	695.0	26.4	-33.4
50.50	13.69	-5.78	-1.24	6.67	.27	.29	741	694.8	25.8	-33.0
50.75	13.46	-5.73	-1.24	6.50	.28	.31	737	694.6	25.2	-32.5
51.00	13.45	-5.68	-1.23	6.54	.28	.30	739	694.4	24.6	-32.1
51.25	13.22	-5.65	-1.23	6.34	.30	.32	734	694.2	24.0	-31.6
51.50	13.00	-5.57	-1.22	6.21	.31	.33	731	694.1	23.4	-31.2
51.75	12.98	-5.52	-1.21	6.25	.30	.33	733	693.9	22.8	-30.7
52.00	12.75	-5.47	-1.20	6.09	.32	.34	729	693.8	22.2	-30.2
52.25	12.63	-5.37	-1.20	6.06	.32	.34	728	693.6	21.6	-29.8
52.50	12.61	-5.31	-1.19	6.11	.32	.34	730	693.5	21.0	-29.3
52.75	12.38	-5.25	-1.18	5.95	.33	.36	726	693.4	20.4	-28.9
53.00	12.16	-5.15	-1.17	5.84	.34	.37	723	693.3	19.8	-28.4
38553.50	12.04	-4.99	-1.16	5.89	-17.34	-17.36	727	693.1	18.6	-27.5
54.00	12.86	-4.83	-1.14	6.89	.27	.30	755	692.9	17.4	-26.6
54.50	13.69	-4.62	-1.12	7.94	.21	.24	780	692.7	16.2	-25.7
55.00	13.61	-4.44	-1.10	8.07	.21	.24	783	692.6	15.0	-24.8
38555.25	12.84	-4.37	-1.08	7.39	-17.25	-17.28	770	692.6	14.4	-24.4
55.50	13.49	-4.29	-1.08	8.12	.21	.24	785	692.6	13.8	-23.9
55.75	14.44	-4.19	-1.06	9.18	.15	.19	804	692.5	13.2	-23.4
56.00	16.62	-4.10	-1.05	11.47	.06	.09	835	692.5	12.6	-23.0
38556.10	21.63	-4.07	-1.05	16.52	-16.90	-16.93	884	692.5	12.4	-22.8
56.20	24.18	-4.03	-1.04	19.11	.84	.87	903	692.5	12.1	-22.6
56.30	26.72	-3.99	-1.04	21.68	.78	.82	920	692.5	11.9	-22.4
56.40	26.68	-3.95	-1.03	21.70	.77	.81	925	692.5	11.7	-22.3
56.50	27.28	-3.92	-1.03	22.33	.74	.78	935	692.5	11.4	-22.1
56.60	27.24	-3.88	-1.02	22.35	.74	.78	936	692.5	11.2	-21.9
56.70	20.76	-3.86	-1.02	15.88	.90	.94	888	692.5	10.9	-21.7
56.80	18.78	-3.82	-1.02	13.95	.96	-17.00	869	692.5	10.7	-21.5
56.90	17.45	-3.77	-1.01	12.67	-17.01	.05	853	692.5	10.5	-21.3
57.00	17.41	-3.74	-1.01	12.65	.02	.05	851	692.5	10.2	-21.2
57.10	18.65	-3.71	-1.00	13.94	-16.97	.01	864	692.5	10.0	-21.0
38557.25	17.45	-3.65	-0.99	12.81	-17.01	-17.05	855	692.6	9.6	-20.7
57.50	15.48	-3.56	-0.98	10.94	.08	.11	835	692.6	9.0	-20.2
57.75	14.95	-3.48	-0.97	10.50	.10	.14	829	692.6	8.4	-19.8
58.00	13.90	-3.38	-0.96	9.55	.14	.18	816	692.7	7.8	-19.3
58.25	13.67	-3.29	-0.95	9.63	.14	.18	816	692.7	7.2	-18.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38558.50	13.74	-3.20	-0.94	9.61	-17.15	-17.18	816	692.8	6.6	-18.4
58.75	13.50	-3.11	-0.92	8.47	.15	.19	814	692.9	6.0	-17.9
59.00	12.23	-3.02	-0.91	8.30	.21	.25	796	693.0	5.4	-17.5
59.25	11.99	-2.92	-0.90	8.16	.22	.26	793	693.1	4.8	-17.0
59.50	11.64	-2.85	-0.88	7.91	.24	.27	789	693.1	4.2	-16.6
59.75	11.28	-2.75	-0.87	7.66	.25	.29	784	693.3	3.6	-16.1
60.00	10.92	-2.66	-0.86	7.40	.27	.30	779	693.4	3.0	-15.6
60.25	10.46	-2.57	-0.84	7.05	.29	.32	772	693.5	2.4	-15.2
60.50	9.48	-2.49	-0.82	6.17	.35	.38	753	693.6	1.8	-14.7
60.75	8.80	-2.39	-0.82	5.60	.40	.43	738	693.8	1.2	-14.2
61.00	9.36	-2.30	-0.81	6.25	.35	.38	756	693.9	0.6	-13.8
61.25	10.54	-2.22	-0.79	7.53	.27	.30	785	694.1	0.0	-13.3
61.50	9.86	-2.13	-0.78	6.94	.31	.34	773	694.2	359.4	-12.9
61.75	9.17	-2.03	-0.77	6.38	.35	.37	760	694.4	358.8	-12.4
62.00	8.69	-1.93	-0.76	6.00	.38	.40	751	694.6	358.2	-11.9
62.25	8.42	-1.85	-0.74	5.83	.39	.41	747	694.8	357.6	-11.5
62.50	8.14	-1.77	-0.73	5.64	.41	.43	742	695.0	357.0	-11.0
62.75	8.38	-1.67	-0.72	5.99	.38	.40	753	695.2	356.4	-10.5
63.00	8.51	-1.58	-0.70	6.23	.37	.39	759	695.4	355.8	-10.1
63.25	8.23	-1.48	-0.69	6.05	.38	.40	755	695.6	355.2	-9.6
63.50	7.84	-1.40	-0.68	5.76	.40	.42	748	695.8	354.6	-9.1
63.75	7.35	-1.29	-0.66	5.40	.43	.45	738	696.0	354.0	-8.7
64.00	7.47	-1.20	-0.65	5.63	.42	.43	745	696.3	353.4	-8.2
64.25	7.70	-1.11	-0.63	5.96	.39	.41	755	696.5	352.8	-7.7
64.50	7.72	-1.03	-0.62	6.07	.39	.40	758	696.8	352.2	-7.3
64.75	7.33	-0.94	-0.61	5.79	.41	.43	752	697.0	351.6	-6.8
65.00	7.15	-0.83	-0.59	5.73	.42	.43	752	697.3	351.0	-6.3
65.25	7.06	-0.74	-0.58	5.75	.42	.43	751	697.6	350.4	-5.8
65.50	6.88	-0.66	-0.56	5.66	.43	.44	750	697.9	349.8	-5.4
65.75	7.62	-0.56	-0.55	6.51	.37	.38	772	698.1	349.2	-4.9
66.00	8.36	-0.47	-0.54	7.35	.32	.32	789	698.4	348.6	-4.4
66.25	9.51	-0.35	-0.52	8.65	.25	.25	812	698.7	347.9	-4.0
66.50	9.33	-0.28	-0.51	8.53	.26	.26	810	699.0	347.3	-3.5
66.75	9.45	-0.18	-0.49	8.78	.24	.25	815	699.4	346.7	-3.0
67.00	9.99	-0.07	-0.48	9.43	.21	.22	825	699.7	346.1	-2.6
67.25	9.08	0.00	-0.47	8.61	.26	.26	813	700.0	345.5	-2.1
67.50	7.76	0.09	-0.46	7.39	.33	.32	793	700.3	344.9	-1.6
67.75	7.47	0.21	-0.44	7.24	.34	.34	790	700.7	344.3	-1.1
68.00	7.08	0.29	-0.43	6.95	.36	.35	784	701.0	343.7	-0.7
68.25	6.49	0.39	-0.41	6.47	.39	.38	775	701.3	343.0	-0.2
68.50	6.21	0.48	-0.40	6.29	.40	.39	774	701.7	342.4	0.3
68.75	6.03	0.56	-0.39	6.19	.41	.40	769	702.1	341.8	0.8
69.00	5.74	0.64	-0.38	6.01	.43	.42	765	702.4	341.2	1.2
69.25	5.57	0.74	-0.36	5.94	.44	.42	763	702.8	340.6	1.7
69.50	5.29	0.81	-0.35	5.75	.45	.44	759	703.1	340.0	2.2
69.75	5.01	0.87	-0.34	5.55	.47	.45	754	703.5	339.3	2.7
70.00	4.53	0.96	-0.32	5.17	.50	.48	743	703.9	338.7	3.1
70.25	4.16	1.04	-0.31	4.89	.53	.51	734	704.3	338.1	3.6
70.50	3.89	1.11	-0.29	4.71	.54	.52	730	704.7	337.5	4.1
70.75	3.83	1.19	-0.28	4.73	.54	.52	733	705.1	336.8	4.6
71.00	4.28	1.27	-0.27	5.28	.50	.48	749	705.5	336.2	5.0
71.25	5.15	1.36	-0.26	6.25	.43	.40	774	705.9	335.6	5.5
71.50	4.89	1.44	-0.24	6.09	.44	.42	771	706.3	335.0	6.0
71.75	4.43	1.51	-0.23	5.71	.47	.44	761	706.7	334.3	6.5
72.00	4.17	1.60	-0.22	5.55	.48	.45	760	707.1	333.7	7.0
72.25	3.92	1.68	-0.21	5.39	.50	.47	757	707.5	333.1	7.4
72.50	3.57	1.76	-0.20	5.13	.52	.49	748	707.9	332.4	7.9
72.75	3.32	1.82	-0.19	4.95	.54	.51	742	708.3	331.8	8.4
73.00	3.08	1.89	-0.18	4.79	.55	.52	739	708.8	331.2	8.9
73.25	2.43	1.97	-0.16	4.24	.60	.57	721	709.2	330.5	9.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38573.50	2.20	2.03	-0.15	4.08	-17.62	-17.58	714	709.6	329.9	9.8
73.75	2.17	2.10	-0.14	4.13	.62	.58	711	710.0	329.3	10.3
74.00	2.46	2.17	-0.13	4.50	.59	.55	727	710.5	328.6	10.8
74.25	2.34	2.24	-0.12	4.46	.59	.55	728	710.9	328.0	11.3
74.50	2.53	2.30	-0.11	4.73	.57	.52	741	711.3	327.3	11.8
74.75	3.04	2.38	-0.10	5.32	.52	.47	757	711.8	326.7	12.2
75.00	3.04	2.43	-0.09	5.37	.52	.47	758	712.2	326.0	12.7
75.25	2.62	2.49	-0.07	5.05	.55	.50	751	712.6	325.4	13.2
75.50	2.53	2.55	-0.06	5.02	.55	.50	753	713.1	324.7	13.7
75.75	2.33	2.62	-0.04	4.91	.56	.51	748	713.5	324.1	14.2
76.00	1.93	2.66	-0.03	4.56	.59	.54	739	714.0	323.4	14.6
76.25	1.64	2.73	-0.02	4.35	.61	.56	736	714.4	322.8	15.1
76.50	1.36	2.76	-0.01	4.11	.63	.58	727	714.9	322.1	15.6
76.75	1.08	2.83	0.00	3.90	.65	.60	720	715.3	321.5	16.1
77.00	1.01	2.87	0.02	3.90	.66	.60	719	715.7	320.8	16.6
77.25	0.95	2.92	0.03	3.90	.66	.60	716	716.2	320.1	17.1
77.50	0.68	2.97	0.04	3.70	.68	.62	705	716.6	319.5	17.5
77.75	0.01	3.02	0.05	3.08	.76	.70	656	717.1	318.8	18.0
78.00	-0.24	3.07	0.06	2.89	.79	.73	628	717.5	318.1	18.5
78.25	-1.00	3.12	0.08	2.20	.91	.84	602	718.0	317.5	19.0
78.50	-0.72	3.21	0.09	2.57	.84	.78	599	718.4	316.8	19.5
78.75	-0.44	3.26	0.10	2.92	.79	.72	647	718.9	316.1	20.0
79.00	0.98	3.29	0.11	4.38	.62	.55	746	719.3	315.4	20.5
79.25	1.18	3.33	0.12	4.63	.60	.53	749	719.7	314.8	20.9
79.50	1.79	3.36	0.13	5.28	.55	.47	766	720.2	314.1	21.4
79.75	1.89	3.39	0.14	5.42	.55	.46	770	720.6	313.4	21.9
80.00	2.31	3.42	0.15	5.87	.51	.42	783	721.0	312.7	22.4
80.25	2.42	3.44	0.16	6.02	.50	.41	788	721.5	312.0	22.9
80.50	1.93	3.45	0.17	5.54	.54	.44	777	721.9	311.3	23.4
80.75	1.34	3.46	0.18	4.97	.58	.49	765	722.3	310.6	23.9
81.00	1.27	3.45	0.19	4.90	.58	.49	771	722.8	309.9	24.3
81.25	-0.03	3.43	0.20	3.60	.71	.63	713	723.2	309.2	24.8
81.50	-0.39	3.39	0.21	3.21	.76	.67	686	723.6	308.5	25.3
81.75	0.18	3.37	0.22	3.77	.69	.60	729	724.0	307.8	25.8
82.00	0.45	3.32	0.22	3.99	.67	.58	737	724.5	307.0	26.3
82.25	0.42	3.27	0.23	3.92	.68	.59	731	724.9	306.3	26.8
82.50	0.50	3.15	0.24	3.89	.68	.59	733	725.3	305.6	27.3
82.75	0.39	3.02	0.24	3.64	.71	.62	721	725.7	304.9	27.7
83.00	0.17	2.89	0.25	3.31	.75	.66	699	726.1	304.1	28.2
83.25	0.59	2.73	0.26	3.58	.72	.62	714	726.5	303.4	28.7
83.50	1.94	2.55	0.26	4.75	.60	.50	765	726.9	302.6	29.2
83.75	3.46	2.40	0.27	6.13	.50	.39	802	727.3	301.9	29.7
84.00	4.88	2.22	0.28	7.38	.43	.31	825	727.7	301.1	30.2
84.25	4.44	2.05	0.28	6.77	.47	.34	812	728.1	300.4	30.7
84.50	3.79	1.88	0.28	5.95	.52	.40	796	728.5	299.6	31.1
84.75	3.34	1.69	0.29	5.32	.56	.45	781	728.8	298.8	31.6
85.00	2.89	1.52	0.30	4.71	.62	.50	761	729.2	298.0	32.1
85.25	2.84	1.36	0.30	4.50	.64	.52	753	729.6	297.3	32.6
85.50	2.28	1.15	0.31	3.74	.72	.60	719	730.0	296.5	33.1
85.75	3.37	0.92	0.31	4.60	.62	.50	767	730.3	295.7	33.6
86.00	3.73	0.74	0.32	4.78	.61	.49	769	730.7	294.9	34.1
86.25	3.98	0.53	0.32	4.83	.61	.48	768	731.0	294.1	34.5
86.50	4.13	0.33	0.33	4.79	.61	.48	768	731.4	293.2	35.0
86.75	4.69	0.13	0.33	5.15	.58	.45	783	731.7	292.4	35.5
87.00	4.42	0.00	0.34	4.76	.60	.48	781	732.0	291.6	36.0
87.25	4.25	0.00	0.34	4.59	.61	.50	781	732.4	290.7	36.5
87.50	4.08	0.00	0.35	4.43	.62	.51	779	732.7	289.9	37.0
87.75	4.01	0.00	0.35	4.36	.63	.52	776	733.0	289.0	37.4
88.00	3.93	0.00	0.36	4.29	.64	.53	768	733.3	288.1	37.9
88.25	3.65	0.00	0.36	4.01	.67	.55	761	733.6	287.2	38.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38588.50	3.57	0.00	0.36	3.93	-17.67	-17.56	758	734.0	286.4	38.9
88.75	3.70	0.00	0.36	4.06	.66	.55	764	734.3	285.4	39.4
89.00	3.72	0.00	0.37	4.09	.66	.54	764	734.5	284.5	39.8
89.25	3.73	0.00	0.37	4.10	.66	.54	762	734.8	283.6	40.3
89.50	3.65	0.00	0.38	4.03	.67	.55	760	735.1	282.7	40.8
89.75	3.45	0.00	0.38	3.83	.69	.57	750	735.4	281.7	41.3
90.00	3.36	0.00	0.38	3.74	.70	.58	751	735.6	280.7	41.7
90.25	3.37	0.00	0.38	3.75	.69	.57	760	735.9	279.8	42.2
90.50	3.38	0.00	0.38	3.76	.69	.57	762	736.2	278.8	42.7
90.75	3.18	0.00	0.38	3.56	.71	.59	755	736.4	277.7	43.1
91.00	3.08	0.00	0.38	3.46	.72	.60	754	736.6	276.7	43.6
91.25	2.98	0.00	0.38	3.36	.73	.62	748	736.9	275.7	44.1
91.50	2.77	0.00	0.38	3.15	.76	.64	734	737.1	274.6	44.5
91.75	2.56	0.00	0.38	2.94	.79	.67	720	737.3	273.5	45.0
92.00	2.35	0.00	0.38	2.73	.82	.70	704	737.5	272.4	45.5
92.25	2.45	0.00	0.38	2.83	.81	.69	704	737.7	271.3	45.9
92.50	2.65	0.00	0.38	3.03	.78	.66	715	737.9	270.1	46.4
92.75	2.75	0.00	0.37	3.12	.77	.64	716	738.1	269.0	46.8
93.00	3.05	0.00	0.37	3.42	.75	.60	727	738.3	267.8	47.3
93.25	3.97	0.00	0.37	4.34	.64	.50	772	738.5	266.5	47.7
93.50	4.06	0.00	0.36	4.42	.63	.49	780	738.6	265.3	48.2
93.75	5.08	0.00	0.36	5.44	.55	.40	804	738.8	264.0	48.6
94.00	6.30	0.00	0.36	6.66	.48	.30	829	738.9	262.7	49.1
94.25	5.05	0.00	0.36	5.41	.57	.39	800	739.1	261.3	49.5
94.50	4.62	0.00	0.35	4.97	.60	.43	788	739.2	260.0	50.0
94.75	4.30	0.00	0.35	4.65	.62	.46	779	739.3	258.6	50.4
95.00	4.18	0.00	0.35	4.53	.63	.47	778	739.5	257.1	50.8
95.25	4.06	0.00	0.34	4.40	.64	.49	776	739.6	255.6	51.2
95.50	4.25	0.00	0.34	4.59	.62	.47	781	739.7	254.1	51.6
95.75	4.44	0.00	0.33	4.77	.60	.45	793	739.8	252.5	52.1
96.00	4.62	0.00	0.33	4.95	.58	.43	801	739.9	250.9	52.5
96.25	4.09	0.00	0.32	4.41	.64	.48	775	739.9	249.2	52.9
96.50	3.55	0.00	0.32	3.87	.69	.54	752	740.0	247.5	53.3
96.75	3.23	0.00	0.32	3.55	.72	.58	743	740.1	245.8	53.6
97.00	3.00	0.00	0.31	3.31	.74	.61	736	740.1	243.9	54.0
97.25	2.98	0.00	0.30	3.28	.74	.61	739	740.2	242.1	54.4
97.50	2.96	0.00	0.30	3.26	.74	.61	741	740.2	240.1	54.8
97.75	2.94	0.00	0.30	3.24	.74	.61	739	740.2	238.1	55.1
98.00	3.23	0.00	0.29	3.52	.72	.58	746	740.2	236.1	55.5
98.25	3.62	0.00	0.28	3.90	.68	.53	762	740.3	234.0	55.8
98.50	4.01	0.00	0.28	4.29	.64	.49	779	740.3	231.8	56.1
98.75	3.89	0.00	0.27	4.16	.65	.50	773	740.3	229.5	56.4
99.00	3.25	0.00	0.27	3.52	.72	.58	740	740.2	227.2	56.7
99.25	2.61	0.00	0.26	2.87	.81	.67	689	740.2	224.8	57.0
99.50	2.59	0.00	0.26	2.85	.80	.67	697	740.2	222.4	57.3
99.75	2.67	0.00	0.25	2.92	.79	.66	709	740.1	219.9	57.5
38600.00	2.55	0.00	0.24	2.79	.81	.68	699	740.1	217.3	57.8
00.25	2.53	0.00	0.23	2.76	.81	.68	701	740.0	214.7	58.0
00.50	2.62	0.00	0.23	2.85	.79	.67	715	740.0	211.9	58.2
00.75	2.60	0.00	0.22	2.82	.80	.67	710	739.9	209.2	58.4
01.00	2.69	0.00	0.22	2.91	.78	.66	718	739.8	206.4	58.6
01.25	2.68	0.00	0.21	2.89	.79	.66	713	739.7	203.5	58.7
01.50	2.66	0.00	0.20	2.86	.79	.66	705	739.6	200.6	58.9
01.75	2.65	0.00	0.20	2.85	.80	.67	700	739.5	197.7	59.0
02.00	2.64	0.00	0.19	2.83	.80	.67	695	739.4	194.8	59.1
02.25	2.73	0.00	0.18	2.91	.79	.66	707	739.2	191.8	59.2
02.50	2.72	0.00	0.18	2.90	.79	.66	709	739.1	188.9	59.2
02.75	2.71	0.00	0.17	2.88	.79	.66	708	739.0	185.9	59.3
03.00	2.49	0.00	0.16	2.65	.82	.70	687	738.8	183.0	59.3
03.25	2.49	0.00	0.16	2.65	.82	.70	697	738.6	180.0	59.3

Table 3 (cont.)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38603.50	2.38	0.00	0.15	2.53	-17.83	-17.72	684	738.5	177.1	59.3
03.75	2.48	0.00	0.14	2.62	.82	.70	694	738.3	174.3	59.2
04.00	2.37	0.00	0.14	2.51	.84	.72	678	738.1	171.5	59.2
04.25	2.27	0.00	0.13	2.40	.86	.74	651	737.9	168.7	59.1
04.50	2.06	0.00	0.13	2.19	.90	.78	612	737.7	166.0	59.0
04.75	2.17	0.00	0.12	2.29	.87	.76	638	737.5	163.3	58.9
05.00	2.28	0.00	0.11	2.39	.86	.74	651	737.3	160.8	58.7
05.25	2.28	0.00	0.11	2.39	.86	.74	629	737.0	158.2	58.6
05.50	2.50	0.00	0.10	2.60	.84	.71	633	736.8	155.8	58.4
05.75	3.54	0.00	0.09	3.63	.70	.56	732	736.6	153.4	58.3
06.00	4.69	0.00	0.09	4.78	.59	.44	784	736.3	151.0	58.1
06.25	4.80	0.00	0.08	4.88	.58	.43	789	736.0	148.8	57.9
06.50	4.61	0.00	0.07	4.68	.59	.45	784	735.8	146.6	57.7
06.75	3.60	0.00	0.07	3.67	.69	.55	736	735.5	144.5	57.4
07.00	3.62	0.00	0.06	3.68	.69	.55	738	735.2	142.4	57.2
07.25	3.44	0.00	0.05	3.49	.71	.58	729	734.9	140.4	57.0
07.50	3.36	0.00	0.05	3.41	.72	.59	725	734.6	138.5	56.7
07.75	3.29	0.00	0.04	3.33	.72	.60	721	734.3	136.6	56.4
08.00	3.21	0.00	0.04	3.25	.73	.61	717	734.0	134.8	56.2
08.25	3.14	0.00	0.03	3.17	.75	.62	703	733.7	133.0	55.9
08.50	3.28	0.00	0.02	3.30	.72	.60	721	733.3	131.3	55.6
08.75	3.22	0.00	0.02	3.24	.72	.61	726	733.0	129.6	55.3
09.00	3.05	0.00	0.01	3.06	.75	.64	709	732.7	128.0	55.0
09.25	3.20	0.00	0.01	3.21	.72	.62	725	732.3	126.4	54.7
09.50	3.24	0.00	0.00	3.24	.72	.61	731	732.0	124.9	54.4
09.75	3.19	0.00	0.00	3.19	.72	.62	727	731.6	123.4	54.1
10.00	3.04	0.00	-0.01	3.03	.75	.64	703	731.2	122.0	53.8
10.25	2.99	0.00	-0.02	2.97	.76	.65	686	730.9	120.5	53.5
10.50	3.26	0.00	-0.03	3.23	.72	.61	716	730.5	119.2	53.1
10.75	3.52	0.00	-0.03	3.49	.69	.58	735	730.1	117.8	52.8
11.00	3.69	0.00	-0.04	3.65	.67	.56	740	729.7	116.5	52.5
38611.10	5.11	0.00	-0.04	5.07	-17.53	-17.42	802	729.5	116.0	52.3
11.20	5.78	0.00	-0.04	5.74	.48	.36	815	729.4	115.5	52.2
11.30	7.10	0.00	-0.05	7.05	.40	.27	835	729.2	115.0	52.1
11.40	8.42	0.00	-0.05	8.37	.33	.18	858	729.0	114.5	51.9
11.50	11.67	0.00	-0.05	11.62	.18	.03	901	728.9	114.0	51.8
11.60	9.76	0.00	-0.06	9.70	.26	.12	877	728.7	113.5	51.7
11.70	7.22	0.00	-0.06	7.16	.39	.26	836	728.5	113.0	51.5
11.80	7.25	0.00	-0.07	7.18	.39	.26	837	728.4	112.5	51.4
11.90	6.64	0.00	-0.07	6.57	.43	.30	825	728.2	112.1	51.3
38612.00	6.46	0.00	-0.07	6.39	-17.44	-17.32	822	728.0	111.6	51.1
12.25	3.86	0.00	-0.08	3.78	.66	.55	734	727.6	110.4	50.8
12.50	3.64	0.00	-0.08	3.56	.68	.57	720	727.2	109.3	50.4
12.75	3.63	0.00	-0.09	3.54	.69	.57	713	726.8	108.2	50.1
13.00	5.58	0.00	-0.10	5.48	.50	.38	795	726.3	107.1	49.7
13.25	5.88	0.00	-0.11	5.77	.48	.36	803	725.9	106.0	49.3
13.50	5.05	0.00	-0.11	4.94	.54	.43	782	725.4	104.9	49.0
13.75	4.64	0.00	-0.12	4.52	.56	.47	776	725.0	103.9	48.6
14.00	4.44	0.00	-0.13	4.31	.58	.49	770	724.5	102.9	48.3
14.25	4.76	0.00	-0.13	4.63	.56	.46	770	724.0	101.9	47.9
14.50	5.09	0.00	-0.14	4.95	.53	.43	777	723.6	100.9	47.5
14.75	5.83	0.00	-0.14	5.69	.47	.37	799	723.1	99.9	47.2
15.00	4.51	0.00	-0.15	4.36	.5	.49	756	722.6	98.9	46.8
15.25	4.13	0.00	-0.16	3.97	.62	.53	741	722.2	98.0	46.4
15.50	4.16	0.00	-0.16	4.00	.61	.53	746	721.7	97.1	46.1
15.75	4.19	0.00	-0.17	4.02	.60	.53	751	721.2	96.2	45.7
16.00	4.13	0.00	-0.18	3.95	.61	.54	743	720.7	95.3	45.3
16.25	4.38	0.00	-0.18	4.20	.59	.51	748	720.2	94.4	44.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38616.50	4.95	0.00	-0.19	4.76	-17.53	-17.46	771	719.7	93.5	44.6
16.75	5.21	0.00	-0.20	5.01	.51	.43	778	719.2	92.6	44.2
17.00	4.86	0.00	-0.21	4.65	.55	.47	762	718.7	91.8	43.8
17.25	4.51	0.00	-0.21	4.30	.58	.50	750	718.2	90.9	43.4
17.50	4.20	0.00	-0.22	3.98	.60	.54	738	717.7	90.1	43.1
17.75	3.66	0.00	-0.23	3.43	.67	.60	707	717.2	89.2	42.7
18.00	3.84	0.00	-0.23	3.61	.64	.58	720	716.7	88.4	42.3
18.25	5.06	0.00	-0.24	4.82	.52	.45	765	716.2	87.6	41.9
18.50	6.90	0.00	-0.24	6.66	.38	.31	813	715.6	86.8	41.5
18.75	9.26	0.00	-0.25	9.01	.25	.17	854	715.1	86.0	41.2
19.00	7.09	0.00	-0.25	6.84	.36	.29	817	714.6	85.2	40.8
19.25	5.96	0.00	-0.26	5.70	.44	.37	790	714.1	84.5	40.4
19.50	6.27	0.00	-0.26	6.01	.42	.35	796	713.6	83.7	40.0
19.75	6.38	0.00	-0.27	6.11	.41	.35	798	713.1	82.9	39.6
20.00	6.50	0.00	-0.27	6.23	.40	.34	800	712.5	82.2	39.2
20.25	6.41	0.00	-0.28	6.13	.40	.35	797	712.0	81.4	38.9
20.50	4.99	0.00	-0.28	4.71	.52	.47	756	711.5	80.7	38.5
20.75	5.42	0.00	-0.29	5.13	.48	.43	771	711.0	79.9	38.1
21.00	5.55	0.00	-0.29	5.26	.46	.42	774	710.4	79.2	37.7
21.25	5.38	0.00	-0.30	5.08	.48	.43	768	709.9	78.4	37.3
21.50	5.10	0.00	-0.30	4.80	.50	.46	759	709.4	77.7	36.9
21.75	5.14	0.00	-0.30	4.84	.49	.46	760	708.9	77.0	36.6
22.00	5.08	0.00	-0.30	4.78	.50	.46	757	708.4	76.3	36.2
22.25	5.02	0.00	-0.31	4.71	.50	.47	755	707.8	75.6	35.8
22.50	4.97	0.00	-0.31	4.66	.50	.47	753	707.3	74.9	35.4
22.75	4.91	0.00	-0.31	4.60	.51	.48	751	706.8	74.2	35.0
23.00	5.17	0.00	-0.32	4.85	.48	.45	758	706.3	73.5	34.6
23.25	5.13	0.00	-0.32	4.81	.48	.46	756	705.8	72.8	34.2
23.50	5.39	0.00	-0.32	5.07	.46	.43	764	705.2	72.1	33.9
23.75	5.45	0.00	-0.32	5.13	.45	.43	765	704.7	71.4	33.5
24.00	5.62	0.00	-0.32	5.30	.44	.42	770	704.2	70.7	33.1
24.25	5.48	0.00	-0.32	5.16	.44	.43	766	703.7	70.1	32.7
24.50	5.66	0.00	-0.32	5.34	.43	.41	769	703.2	69.4	32.3
24.75	5.63	0.00	-0.32	5.31	.43	.42	767	702.7	68.7	31.9
25.00	5.80	0.00	-0.32	5.48	.41	.40	771	702.2	68.0	31.5
25.25	5.37	0.00	-0.32	5.05	.45	.44	758	701.7	67.4	31.2
25.50	5.14	0.00	-0.32	4.82	.47	.46	750	701.2	66.7	30.8
25.75	5.73	0.00	-0.32	5.41	.41	.41	767	700.7	66.1	30.4
26.00	5.82	0.00	-0.32	5.50	.40	.40	769	700.2	65.4	30.0
26.25	6.01	0.00	-0.32	5.69	.39	.39	773	699.7	64.8	29.6
26.50	6.61	-0.03	-0.32	6.26	.35	.35	787	699.2	64.1	29.2
26.75	6.49	-0.14	-0.32	6.03	.36	.36	781	698.7	63.5	28.8
27.00	5.96	-0.23	-0.31	5.42	.40	.41	764	698.3	62.8	28.5
27.25	5.33	-0.34	-0.31	4.69	.46	.47	740	697.8	62.2	28.1
27.50	5.22	-0.44	-0.31	4.47	.48	.50	730	697.3	61.5	27.7
27.75	5.21	-0.54	-0.31	4.37	.49	.51	726	696.8	60.9	27.3
28.00	4.48	-0.64	-0.31	3.53	.58	.60	681	696.4	60.3	26.9
28.25	4.99	-0.74	-0.30	3.96	.53	.55	706	695.9	59.6	26.5
28.50	5.30	-0.85	-0.30	4.15	.51	.53	714	695.5	59.0	26.1
28.75	5.60	-0.94	-0.30	4.37	.48	.51	723	695.0	58.4	25.7
29.00	5.91	-1.05	-0.29	4.57	.46	.49	731	694.6	57.8	25.4
29.25	6.94	-1.15	-0.29	5.50	.38	.41	761	694.1	57.1	25.0
29.50	7.25	-1.24	-0.28	5.73	.36	.39	768	693.7	56.5	24.6
29.75	7.15	-1.32	-0.28	5.54	.37	.40	761	693.2	55.9	24.2
30.00	6.63	-1.41	-0.28	4.94	.42	.45	742	692.8	55.3	23.8
30.25	6.94	-1.50	-0.27	5.17	.40	.43	748	692.4	54.7	23.4
30.50	7.25	-1.61	-0.27	5.37	.38	.42	753	692.0	54.0	23.0
30.75	7.46	-1.69	-0.26	5.51	.37	.41	757	691.6	53.4	22.7
31.00	7.77	-1.78	-0.26	5.74	.35	.39	762	691.2	52.8	22.3
31.25	8.19	-1.86	-0.25	6.08	.32	.36	771	690.8	52.2	21.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38631.50	8.50	-1.95	-0.25	6.29	-17.31	-17.35	775	690.4	51.6	21.5
31.75	9.12	-2.03	-0.24	6.85	.27	.31	787	690.0	51.0	21.1
32.00	8.92	-2.11	-0.23	6.57	.28	.33	780	689.6	50.4	20.7
32.25	8.71	-2.20	-0.23	6.29	.30	.35	774	689.2	49.8	20.3
32.50	8.71	-2.28	-0.22	6.21	.30	.35	771	688.8	49.2	20.0
32.75	9.13	-2.34	-0.22	6.56	.28	.33	779	688.5	48.6	19.6
33.00	9.95	-2.42	-0.21	7.33	.22	.28	796	688.1	48.0	19.2
33.25	10.26	-2.47	-0.20	7.59	.20	.26	801	687.8	47.4	18.8
33.50	10.37	-2.53	-0.20	7.63	.20	.26	800	687.4	46.8	18.4
33.75	10.68	-2.60	-0.19	7.89	.19	.25	803	687.1	46.2	18.0
34.00	10.88	-2.65	-0.18	8.05	.18	.24	805	686.8	45.6	17.6
34.25	12.22	-2.70	-0.17	9.35	.11	.18	825	686.4	45.0	17.3
34.50	12.32	-2.73	-0.17	9.42	.10	.17	826	686.1	44.4	16.9
34.75	10.98	-2.75	-0.16	8.06	.17	.24	804	685.8	43.8	16.5
35.00	10.04	-2.76	-0.16	7.12	.22	.29	786	685.5	43.2	16.1
35.25	9.42	-2.79	-0.15	6.49	.27	.33	770	685.2	42.7	15.7
35.50	9.52	-2.80	-0.14	6.58	.26	.33	771	684.9	42.1	15.3
35.75	9.40	-2.80	-0.13	6.48	.27	.33	769	684.6	41.5	14.9
36.00	9.40	-2.79	-0.13	6.48	.26	.33	768	684.4	40.9	14.6
36.25	9.59	-2.77	-0.12	6.70	.25	.32	773	684.1	40.3	14.2
36.50	9.89	-2.75	-0.11	7.02	.23	.30	779	683.8	39.7	13.8
36.75	9.77	-2.74	-0.10	6.93	.23	.31	776	683.6	39.1	13.4
37.00	9.75	-2.72	-0.10	6.93	.23	.31	776	683.3	38.6	13.0
37.25	9.84	-2.68	-0.09	7.07	.22	.30	778	683.1	38.0	12.6
37.50	9.92	-2.65	-0.08	7.19	.21	.29	779	682.9	37.4	12.3
37.75	9.79	-2.63	-0.07	7.10	.22	.29	777	682.7	36.8	11.9
38.00	9.87	-2.56	-0.07	7.24	.21	.29	779	682.4	36.2	11.5
38.25	9.64	-2.52	-0.06	7.06	.21	.30	776	682.2	35.7	11.1
38.50	9.51	-2.46	-0.06	6.99	.21	.30	775	682.0	35.1	10.7
38.75	9.37	-2.41	-0.05	6.92	.21	.30	774	681.9	34.5	10.3
39.00	11.40	-2.33	-0.04	9.03	.09	.19	812	681.7	33.9	9.9
39.25	14.56	-2.30	-0.03	12.23	-16.95	.05	854	681.5	33.4	9.6
39.50	14.11	-2.23	-0.02	11.86	.96	.06	849	681.3	32.8	9.2
39.75	13.45	-2.18	-0.02	11.25	.99	.09	839	681.2	32.2	8.8
40.00	12.48	-2.11	-0.01	10.36	-17.03	.13	828	681.0	31.6	8.4
40.25	11.40	-2.06	0.00	9.34	.07	.17	815	680.9	31.1	8.0
40.50	11.25	-2.00	0.02	9.27	.08	.17	813	680.8	30.5	7.6
40.75	11.09	-1.92	0.02	9.19	.08	.18	809	680.7	29.9	7.3
41.00	10.11	-1.86	0.04	8.29	.13	.22	794	680.6	29.4	6.9
41.25	10.26	-1.79	0.04	8.51	.11	.21	798	680.5	28.8	6.5
41.50	10.60	-1.71	0.05	8.94	.09	.19	804	680.4	28.2	6.1
41.75	10.64	-1.65	0.06	9.05	.09	.19	804	680.3	27.6	5.7
42.00	10.88	-1.58	0.08	9.39	.07	.17	809	680.2	27.1	5.3
42.25	10.81	-1.50	0.08	9.39	.07	.17	808	680.1	26.5	5.0
42.50	10.84	-1.46	0.10	9.47	.07	.17	809	680.0	25.9	4.6
42.75	10.96	-1.38	0.11	9.69	.06	.16	811	680.0	25.4	4.2
43.00	10.88	-1.32	0.12	9.67	.06	.16	811	680.0	24.8	3.8
43.25	10.79	-1.26	0.13	9.66	.05	.16	811	680.0	24.2	3.4
43.50	10.59	-1.19	0.14	9.55	.06	.16	808	679.9	23.7	3.0
43.75	10.19	-1.12	0.15	9.21	.08	.18	801	679.9	23.1	2.7
44.00	9.47	-1.04	0.16	8.59	.11	.21	790	679.9	22.5	2.3
44.25	10.81	-0.96	0.17	10.02	.05	.14	810	679.9	22.0	1.9
44.50	11.01	-0.89	0.18	10.30	.03	.13	814	679.9	21.4	1.5
44.75	11.20	-0.82	0.19	10.57	.02	.12	818	680.0	20.8	1.1
45.00	12.74	-0.74	0.20	12.20	-16.95	.05	838	680.0	20.3	0.7
45.25	14.16	-0.66	0.21	13.71	.90	.00	855	680.0	19.7	0.4
45.50	12.41	-0.61	0.22	13.02	.92	.02	848	680.1	19.1	0.0
45.75	13.18	-0.53	0.23	12.88	.92	.02	848	680.1	18.6	-0.4
46.00	14.38	-0.44	0.24	14.18	.87	-16.98	861	680.2	18.0	-0.8
46.25	15.17	-0.37	0.25	15.05	.85	.95	868	680.3	17.5	-1.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38646.50	16.15	-0.28	0.26	16.13	-16.82	-16.92	875	680.4	16.9	-1.5
46.75	15.69	-0.20	0.27	15.76	.83	.94	871	680.5	16.3	-1.9
47.00	15.33	-0.12	0.28	15.50	.84	.94	868	680.6	15.8	-2.3
47.25	12.49	-0.02	0.30	12.77	.93	-17.03	842	680.7	15.2	-2.7
47.50	11.60	0.04	0.31	11.96	.96	.06	832	680.8	14.6	-3.1
47.75	11.22	0.12	0.32	11.66	.97	.07	828	680.9	14.1	-3.5
48.00	11.05	0.21	0.33	11.59	.98	.07	827	681.1	13.5	-3.8
48.25	11.07	0.28	0.34	11.69	.97	.07	828	681.2	12.9	-4.2
48.50	10.98	0.35	0.35	11.68	.98	.07	825	681.4	12.4	-4.6
48.75	10.99	0.43	0.36	11.78	.98	.06	824	681.5	11.8	-5.0
49.00	11.10	0.53	0.37	12.00	.97	.06	826	681.7	11.3	-5.4
49.25	11.62	0.61	0.38	12.61	.95	.03	834	681.9	10.7	-5.7
49.50	9.65	0.66	0.39	10.70	-17.02	.10	810	682.1	10.1	-6.1
49.75	8.61	0.75	0.40	9.76	.06	.14	796	682.3	9.6	-6.5
50.00	8.21	0.84	0.41	9.46	.08	.15	791	682.5	9.0	-6.9
50.25	7.88	0.92	0.42	9.22	.09	.17	787	682.7	8.4	-7.3
50.50	7.75	1.00	0.43	9.17	.09	.17	785	682.9	7.9	-7.7
50.75	7.62	1.07	0.45	9.14	.10	.17	784	683.1	7.3	-8.1
51.00	7.49	1.16	0.46	9.10	.10	.17	783	683.4	6.8	-8.4
51.25	7.25	1.24	0.47	8.96	.11	.18	780	683.6	6.2	-8.8
51.50	7.13	1.32	0.48	8.93	.11	.18	779	683.9	5.6	-9.2
51.75	7.10	1.39	0.49	8.98	.11	.17	780	684.1	5.1	-9.6
52.00	6.97	1.48	0.50	8.95	.11	.18	779	684.4	4.5	-10.0
52.25	6.74	1.58	0.51	8.83	.12	.18	776	684.7	3.9	-10.3
52.50	6.41	1.68	0.52	8.61	.13	.19	772	685.0	3.4	-10.7
52.75	6.28	1.77	0.53	8.58	.13	.19	771	685.3	2.8	-11.1
53.00	6.57	1.85	0.54	8.96	.11	.17	777	685.6	2.2	-11.5
53.25	6.65	1.93	0.55	9.13	.11	.16	779	685.9	1.7	-11.9
53.50	6.62	2.01	0.56	9.19	.10	.16	780	686.2	1.1	-12.2
53.75	6.50	2.10	0.57	9.17	.11	.16	779	686.5	0.5	-12.6
54.00	7.10	2.19	0.58	9.84	.07	.13	789	686.8	360.0	-13.0
54.25	7.28	2.25	0.60	10.13	.06	.12	793	687.2	359.4	-13.4
54.50	7.36	2.34	0.61	10.32	.06	.11	795	687.5	358.8	-13.8
54.75	7.24	2.43	0.62	10.29	.06	.11	795	687.9	358.3	-14.1
55.00	8.15	2.50	0.63	11.28	.02	.07	810	688.2	357.7	-14.5
55.25	8.65	2.59	0.64	11.87	.00	.05	816	688.6	357.1	-14.9
55.50	8.63	2.66	0.65	11.94	.00	.05	815	689.0	356.6	-15.3
55.75	8.10	2.74	0.66	11.50	.02	.06	808	689.3	356.0	-15.7
56.00	7.36	2.83	0.67	10.86	.04	.09	800	689.7	355.4	-16.0
56.25	7.14	2.90	0.68	10.72	.05	.09	797	690.1	354.9	-16.4
56.50	5.89	2.96	0.69	9.54	.10	.14	780	690.5	354.3	-16.8
56.75	5.26	3.05	0.70	9.01	.13	.16	771	690.9	353.7	-17.2
57.00	4.53	3.14	0.71	8.38	.16	.19	759	691.3	353.2	-17.6
57.25	4.00	3.22	0.72	7.94	.18	.22	750	691.7	352.6	-17.9
57.50	3.58	3.28	0.72	7.58	.20	.23	743	692.1	352.0	-18.3
57.75	3.46	3.36	0.73	7.56	.21	.23	742	692.6	351.4	-18.7
58.00	3.46	3.45	0.74	7.64	.20	.23	744	693.0	350.9	-19.1
58.25	3.24	3.51	0.75	7.50	.21	.23	741	693.4	350.3	-19.5
58.50	3.24	3.58	0.76	7.58	.21	.23	744	693.9	349.7	-19.8
58.75	3.02	3.68	0.77	7.47	.21	.23	740	694.3	349.1	-20.2
59.00	3.12	3.75	0.78	7.66	.21	.23	743	694.8	348.6	-20.6
59.25	3.22	3.82	0.79	7.83	.20	.22	746	695.2	348.0	-21.0
59.50	3.02	3.90	0.79	7.70	.21	.22	742	695.7	347.4	-21.4
59.75	2.81	3.97	0.80	7.58	.22	.23	738	696.2	346.8	-21.7
60.00	4.56	4.07	0.81	9.44	.12	.14	775	696.6	346.3	-22.1
60.25	6.72	4.12	0.82	11.66	.03	.05	807	697.1	345.7	-22.5
60.50	6.31	4.20	0.83	11.35	.04	.05	805	697.6	345.1	-22.9
60.75	5.50	4.29	0.84	10.62	.08	.09	791	698.1	344.5	-23.2
61.00	4.06	4.33	0.84	9.23	.14	.15	769	698.5	343.9	-23.6
61.25	3.55	4.41	0.85	8.81	.16	.16	761	699.0	343.3	-24.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38661.50	3.66	4.48	0.86	9.00	-17.15	-17.16	764	699.5	342.8	-24.4
61.75	3.36	4.53	0.87	8.76	.17	.17	760	700.0	342.2	-24.8
62.00	3.37	4.61	0.88	8.87	.16	.16	765	700.5	341.6	-25.1
62.25	3.08	4.68	0.89	8.64	.17	.17	759	701.0	341.0	-25.5
62.50	2.88	4.73	0.89	8.50	.18	.18	754	701.5	340.4	-25.9
62.75	2.38	4.81	0.90	8.10	.21	.20	745	702.0	339.8	-26.3
63.00	2.30	4.87	0.91	8.07	.21	.20	744	702.6	339.2	-26.7
63.25	2.21	4.94	0.92	8.07	.21	.20	743	703.1	338.7	-27.0
63.50	1.72	4.99	0.92	7.63	.23	.22	735	703.6	338.1	-27.4
63.75	1.64	5.07	0.93	7.63	.23	.21	741	704.1	337.5	-27.8
64.00	1.35	5.13	0.94	7.42	.24	.22	736	704.6	336.9	-28.2
64.25	1.38	5.18	0.94	7.50	.24	.22	735	705.2	336.3	-28.5
64.50	1.09	5.24	0.94	7.28	.26	.23	727	705.7	335.7	-28.9
64.75	0.81	5.29	0.95	7.05	.27	.25	723	706.2	335.1	-29.3
65.00	0.64	5.35	0.96	6.95	.27	.25	724	706.8	334.5	-29.7
65.25	0.67	5.41	0.96	7.04	.27	.24	727	707.3	333.9	-30.1
65.50	0.70	5.45	0.96	7.11	.26	.24	728	707.8	333.3	-30.4
65.75	0.53	5.52	0.97	7.02	.27	.24	724	708.4	332.7	-30.8
66.00	1.39	5.56	0.98	7.93	.22	.19	743	708.9	332.1	-31.2
66.25	2.97	5.60	0.98	9.55	.15	.12	770	709.5	331.5	-31.6
66.50	2.70	5.66	0.98	9.35	.17	.12	767	710.0	330.9	-32.0
66.75	2.13	5.69	0.99	8.80	.19	.15	756	710.5	330.2	-32.3
67.00	3.82	5.76	0.99	10.57	.12	.07	787	711.1	329.6	-32.7
67.25	3.45	5.78	0.99	10.23	.13	.08	783	711.6	329.0	-33.1
67.50	1.86	5.81	1.00	8.67	.20	.15	758	712.2	328.4	-33.5
67.75	1.49	5.88	1.00	8.37	.21	.16	755	712.7	327.8	-33.8
68.00	1.34	5.89	1.00	8.23	.21	.17	753	713.3	327.2	-34.2
68.25	1.81	5.94	1.00	8.74	.20	.15	757	713.8	326.5	-34.6
68.50	1.66	5.98	1.00	8.64	.21	.15	752	714.3	325.9	-35.0
68.75	1.71	5.99	1.01	8.72	.21	.14	754	714.9	325.3	-35.4
69.00	1.67	6.02	1.01	8.70	.21	.14	754	715.4	324.7	-35.7
69.25	1.63	6.07	1.01	8.72	.21	.14	755	716.0	324.0	-36.1
69.50	1.39	6.10	1.01	8.49	.22	.15	751	716.5	323.4	-36.5
69.75	1.25	6.11	1.01	8.36	.22	.16	753	717.1	322.8	-36.9
70.00	1.21	6.13	1.02	8.36	.22	.16	758	717.6	322.1	-37.2
70.25	1.39	6.15	1.02	8.56	.20	.14	763	718.2	321.5	-37.6
70.50	0.54	6.18	1.02	7.74	.25	.19	746	718.7	320.9	-38.0
70.75	0.41	6.19	1.02	7.62	.25	.19	748	719.2	320.2	-38.4
71.00	0.07	6.20	1.01	7.28	.27	.21	735	719.8	319.6	-38.8
71.25	-0.26	6.21	1.01	6.96	.30	.23	724	720.3	318.9	-39.1
71.50	-0.79	6.23	1.01	6.45	.33	.26	708	720.8	318.3	-39.5
71.75	0.32	6.25	1.01	7.58	.27	.19	735	721.4	317.6	-39.9
72.00	2.88	6.26	1.01	10.15	.15	.07	785	721.9	316.9	-40.3
72.25	4.52	6.27	1.01	11.80	.09	.00	809	722.4	316.3	-40.6
72.50	2.86	6.30	1.01	10.16	.15	.06	784	723.0	315.6	-41.0
72.75	1.92	6.30	1.01	9.23	.19	.10	768	723.5	314.9	-41.4
73.00	2.95	6.30	1.01	10.25	.15	.05	785	724.0	314.3	-41.8
73.25	3.67	6.30	1.01	10.97	.12	.02	796	724.5	313.6	-42.1
73.50	2.02	6.30	1.00	9.31	.19	.10	770	725.0	312.9	-42.5
73.75	1.40	6.30	1.00	8.70	.22	.12	759	725.6	312.2	-42.9
74.00	0.89	6.28	1.00	8.18	.25	.15	745	726.1	311.5	-43.3
74.25	0.39	6.26	1.00	7.65	.27	.18	735	726.6	310.8	-43.6
74.50	0.19	6.23	1.00	7.42	.28	.19	735	727.1	310.1	-44.0
74.75	0.62	6.21	1.00	7.83	.26	.17	744	727.6	309.4	-44.4
75.00	1.97	6.20	1.00	9.17	.20	.10	772	728.1	308.7	-44.8
75.25	1.99	6.18	1.00	9.17	.20	.09	770	728.6	308.0	-45.1
75.50	0.98	6.13	1.00	8.11	.25	.15	748	729.1	307.3	-45.5
75.75	-0.23	6.10	1.00	6.86	.32	.22	721	729.6	306.6	-45.9
76.00	-0.20	6.05	0.99	6.84	.32	.22	720	730.0	305.9	-46.3
76.25	0.13	6.00	0.99	7.13	.31	.20	724	730.5	305.1	-46.6

Table 3 (cont.)

ORIGINAL PAGE IS POOR

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38676.50	-0.14	5.97	0.98	6.81	-17.33	-17.22	713	731.0	304.4	-47.0
76.75	0.51	5.90	0.98	7.39	.30	.18	732	731.5	303.7	-47.4
77.00	1.48	5.83	0.97	8.28	.25	.13	754	731.9	302.9	-47.7
77.25	2.24	5.78	0.96	8.98	.21	.09	771	732.4	302.1	-48.1
77.50	1.25	5.70	0.96	7.91	.27	.14	745	732.8	301.4	-48.5
77.75	1.10	5.62	0.95	7.67	.28	.16	742	733.3	300.6	-48.9
78.00	0.74	5.56	0.95	7.24	.30	.18	736	733.7	299.8	-49.2
78.25	-0.03	5.47	0.94	6.37	.35	.24	712	734.2	299.1	-49.6
78.50	0.02	5.36	0.94	6.32	.35	.24	719	734.6	298.3	-50.0
78.75	-0.02	5.25	0.93	6.16	.36	.25	713	735.1	297.5	-50.3
79.00	-0.27	5.08	0.92	5.73	.39	.28	695	735.5	296.6	-50.7
79.25	-0.10	4.89	0.92	5.71	.39	.28	703	735.9	295.8	-51.1
79.50	-0.03	4.71	0.91	5.59	.40	.29	700	736.3	295.0	-51.4
79.75	0.35	4.41	0.90	5.67	.39	.29	697	736.7	294.2	-51.8
80.00	0.53	4.18	0.90	5.61	.40	.29	687	737.1	293.3	-52.2
80.25	1.13	3.68	0.89	5.89	.38	.27	701	737.5	292.5	-52.5
80.50	2.34	3.57	0.88	6.79	.33	.20	727	737.9	291.6	-52.9
80.75	1.91	3.27	0.87	6.05	.39	.25	671	738.3	290.7	-53.2
81.00	2.00	3.00	0.86	5.86	.40	.26	661	738.7	289.8	-53.6
81.25	2.09	2.68	0.85	5.62	.41	.28	664	739.1	288.9	-54.0
81.50	1.98	2.39	0.84	5.21	.44	.31	636	739.5	288.0	-54.3
81.75	1.88	2.06	0.84	4.78	.48	.35	603	739.8	287.1	-54.7
82.00	2.08	1.77	0.83	4.68	.48	.36	609	740.2	286.1	-55.0
82.25	3.63	1.50	0.82	5.95	.39	.25	691	740.5	285.2	-55.4
82.50	3.64	1.23	0.81	5.68	.41	.27	672	740.9	284.2	-55.7
82.75	3.65	0.87	0.80	5.32	.43	.30	677	741.2	283.2	-56.1
83.00	3.25	0.00	0.79	4.04	.54	.42	587	741.5	282.2	-56.4
83.25	4.19	0.00	0.79	4.98	.45	.33	663	741.9	281.2	-56.8
83.50	4.42	0.00	0.78	5.20	.44	.31	660	742.2	280.1	-57.1
83.75	4.34	0.00	0.77	5.11	.45	.31	656	742.5	279.0	-57.5
84.00	4.57	0.00	0.76	5.33	.43	.30	680	742.8	278.0	-57.8
84.25	4.50	0.00	0.75	5.25	.44	.30	669	743.1	276.8	-58.1
84.50	4.54	0.00	0.74	5.28	.43	.30	681	743.4	275.7	-58.5
84.75	4.78	0.00	0.74	5.52	.40	.28	708	743.6	274.6	-58.8
85.00	5.03	0.00	0.73	5.76	.39	.26	717	743.9	273.4	-59.1
85.25	5.18	0.00	0.72	5.90	.38	.25	712	744.2	272.2	-59.5
85.50	5.13	0.00	0.70	5.83	.39	.25	701	744.4	270.9	-59.8
85.75	5.29	0.00	0.69	5.98	.38	.24	711	744.7	269.7	-60.1
86.00	5.55	0.00	0.68	6.23	.36	.22	730	744.9	268.4	-60.4
86.25	5.10	0.00	0.67	5.77	.39	.25	710	745.2	267.0	-60.7
86.50	5.27	0.00	0.66	5.93	.38	.24	709	745.4	265.7	-61.0
86.75	5.96	0.00	0.65	6.61	.34	.19	733	745.6	264.3	-61.4
87.00	6.24	0.00	0.64	6.88	.33	.17	737	745.8	262.8	-61.7
87.25	6.93	0.00	0.62	7.55	.29	.12	752	746.0	261.3	-62.0
87.50	7.84	0.00	0.61	8.45	.24	.07	776	746.2	259.8	-62.2
87.75	8.13	0.00	0.60	8.73	.23	.05	781	746.4	258.2	-62.5
88.00	8.63	0.00	0.59	9.22	.21	.03	791	746.6	256.6	-62.8
88.25	7.18	0.00	0.57	7.75	.28	.11	760	746.8	255.0	-63.1
88.50	5.94	0.00	0.56	6.50	.35	.19	728	746.9	253.3	-63.3
88.75	5.22	0.00	0.55	5.77	.40	.24	703	747.1	251.5	-63.6
89.00	5.38	0.00	0.55	5.93	.39	.23	703	747.2	249.7	-63.9
89.25	6.02	0.00	0.52	6.54	.35	.18	727	747.4	247.8	-64.1
89.50	5.95	0.00	0.51	6.46	.36	.18	725	747.5	245.8	-64.3
89.75	5.46	0.00	0.50	5.96	.39	.22	702	747.6	243.8	-64.6
90.00	5.59	0.00	0.49	6.08	.38	.21	706	747.7	241.8	-64.8
90.25	5.83	0.00	0.47	6.30	.36	.20	724	747.8	239.6	-65.0
90.50	5.13	0.00	0.46	5.59	.41	.25	704	747.9	237.4	-65.2
90.75	4.64	0.00	0.45	5.09	.44	.30	688	748.0	235.1	-65.3
91.00	4.25	0.00	0.44	4.69	.47	.34	676	748.1	232.8	-65.5
91.25	4.07	0.00	0.42	4.49	.49	.35	665	748.2	230.4	-65.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38691.50	3.68	0.00	0.41	4.09	-17.53	-17.39	631	748.2	227.9	-65.8
91.75	3.70	0.00	0.40	4.10	.53	.39	629	748.3	225.3	-65.9
92.00	4.03	0.00	0.38	4.41	.50	.36	656	748.3	222.7	-66.0
92.25	4.47	0.00	0.37	4.84	.46	.32	686	748.4	220.0	-66.1
92.50	4.59	0.00	0.36	4.95	.45	.31	692	748.4	217.2	-66.2
92.75	4.71	0.00	0.35	5.06	.44	.30	692	748.4	214.4	-66.3
93.00	4.83	0.00	0.34	5.17	.44	.28	682	748.4	211.6	-66.3
93.25	4.95	0.00	0.32	5.27	.44	.27	676	748.4	208.6	-66.3
93.50	4.87	0.00	0.31	5.18	.44	.28	686	748.4	205.7	-66.3
93.75	4.99	0.00	0.30	5.29	.43	.28	706	748.4	202.7	-66.3
94.00	5.31	0.00	0.28	5.59	.40	.25	720	748.4	199.7	-66.2
94.25	6.05	0.00	0.27	6.32	.36	.19	738	748.4	196.7	-66.2
94.50	7.81	0.00	0.26	8.07	.27	.07	776	748.3	193.7	-66.1
94.75	7.21	0.00	0.25	7.46	.30	.10	761	748.3	190.7	-65.9
95.00	6.71	0.00	0.24	6.95	.32	.15	755	748.3	187.7	-65.8
95.25	6.31	0.00	0.22	6.53	.34	.17	745	748.2	184.7	-65.7
95.50	5.91	0.00	0.21	6.12	.37	.20	731	748.1	181.8	-65.5
95.75	5.82	0.00	0.20	6.02	.38	.21	725	748.0	178.9	-65.3
96.00	5.73	0.00	0.19	5.92	.39	.22	723	748.0	176.1	-65.1
96.25	5.74	0.00	0.18	5.92	.38	.22	726	747.9	173.3	-64.8
96.50	5.75	0.00	0.17	5.92	.38	.22	728	747.8	170.6	-64.6
96.75	5.56	0.00	0.16	5.72	.40	.24	722	747.6	167.9	-64.3
97.00	5.57	0.00	0.15	5.72	.40	.24	718	747.5	165.3	-64.0
97.25	6.51	0.00	0.14	6.65	.34	.17	747	747.4	162.8	-63.7
97.50	6.73	0.00	0.13	6.86	.33	.15	754	747.3	160.3	-63.4
97.75	6.74	0.00	0.12	6.86	.32	.16	761	747.1	157.9	-63.1
98.00	6.23	0.00	0.12	6.35	.35	.19	745	747.0	155.6	-62.7
98.25	6.24	0.00	0.11	6.35	.35	.19	743	746.8	153.3	-62.4
98.50	6.15	0.00	0.10	6.25	.36	.20	742	746.6	151.2	-62.0
98.75	6.06	0.00	0.10	6.16	.36	.21	743	746.5	149.0	-61.6
99.00	5.96	0.00	0.09	6.05	.37	.22	742	746.3	147.0	-61.3
99.25	5.56	0.00	0.08	5.64	.40	.25	726	746.1	145.0	-60.9
99.50	5.16	0.00	0.07	5.23	.43	.28	708	745.9	143.1	-60.4
99.75	4.97	0.00	0.06	5.03	.45	.30	700	745.7	141.2	-60.0
38700.00	4.87	0.00	0.06	4.93	.46	.31	691	745.5	139.4	-59.6
00.25	5.71	0.00	0.06	5.77	.39	.24	724	745.3	137.7	-59.2
00.50	7.26	0.00	0.05	7.31	.29	.13	771	745.1	136.0	-58.7
00.75	8.82	0.00	0.05	8.87	.21	.05	805	744.8	134.3	-58.3
01.00	9.65	0.00	0.04	9.69	.18	.00	814	744.6	132.7	-57.8
01.25	9.66	0.00	0.04	9.70	.18	-16.99	811	744.3	131.1	-57.4
01.50	8.64	0.00	0.04	8.68	.23	-17.04	793	744.1	129.6	-56.9
01.75	8.04	0.00	0.04	8.08	.25	.08	786	743.8	128.2	-56.4
02.00	7.43	0.00	0.03	7.46	.28	.12	775	743.6	126.7	-56.0
02.25	7.23	0.00	0.03	7.26	.30	.13	765	743.3	125.3	-55.5
02.50	6.63	0.00	0.03	6.66	.34	.17	749	743.0	124.0	-55.0
02.75	6.44	0.00	0.02	6.46	.34	.19	751	742.7	122.6	-54.5
03.00	6.34	0.00	0.02	6.36	.35	.20	751	742.5	121.3	-54.0
03.25	6.25	0.00	0.02	6.27	.36	.21	743	742.2	120.1	-53.5
03.50	6.27	0.00	0.02	6.29	.36	.20	740	741.9	118.8	-53.0
03.75	5.97	0.00	0.02	5.99	.38	.22	726	741.5	117.6	-52.6
04.00	5.99	0.00	0.01	6.00	.38	.22	724	741.2	116.4	-52.1
04.25	6.00	0.00	0.01	6.01	.38	.22	724	740.9	115.3	-51.5
04.50	5.91	0.00	0.00	5.91	.39	.23	723	740.6	114.1	-51.0
04.75	6.03	0.00	0.00	6.03	.38	.22	727	740.3	113.0	-50.5
05.00	6.36	0.00	0.00	6.36	.36	.19	734	739.9	111.9	-50.0
05.25	6.17	0.00	0.00	6.17	.37	.21	730	739.6	110.9	-49.5
05.50	6.08	0.00	-0.01	6.07	.37	.23	733	739.2	109.8	-49.0
05.75	5.89	0.00	-0.02	5.87	.39	.24	725	738.9	108.8	-48.5
06.00	5.81	0.00	-0.02	5.79	.39	.25	720	738.5	107.8	-48.0
06.25	5.52	0.00	-0.02	5.50	.41	.27	709	738.2	106.7	-47.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38706.50	5.33	0.00	-0.03	5.30	-17.43	-17.29	707	737.8	105.8	-46.9
06.75	5.35	0.00	-0.04	5.31	.42	.29	711	737.4	104.8	-46.4
07.00	4.96	0.00	-0.04	4.92	.46	.33	688	737.1	103.8	-45.9
07.25	5.60	0.00	-0.04	5.56	.41	.27	710	736.7	102.9	-45.4
07.50	6.55	0.00	-0.05	6.50	.34	.19	741	736.3	102.0	-44.8
07.75	7.08	0.00	-0.05	7.03	.31	.16	759	735.9	101.0	-44.3
08.00	7.42	0.00	-0.06	7.36	.29	.14	766	735.5	100.1	-43.8
08.25	8.37	0.00	-0.06	8.31	.24	.07	786	735.1	99.2	-43.3
08.50	6.85	0.00	-0.07	6.78	.32	.16	748	734.7	98.4	-42.7
08.75	7.91	0.00	-0.07	7.84	.26	.11	776	734.3	97.5	-42.2
09.00	9.99	0.00	-0.08	9.91	.16	.01	814	733.9	96.6	-41.7
09.25	7.34	0.00	-0.08	7.26	.29	.13	762	733.5	95.8	-41.1
09.50	5.83	0.00	-0.08	5.75	.39	.24	707	733.1	94.9	-40.6
09.75	5.76	0.00	-0.09	5.67	.40	.26	709	732.7	94.1	-40.1
10.00	6.09	0.00	-0.09	6.00	.37	.24	726	732.3	93.2	-39.6
10.25	6.23	0.00	-0.10	6.13	.36	.23	731	731.8	92.4	-39.0
10.50	6.16	0.00	-0.10	6.06	.37	.24	726	731.4	91.6	-38.5
10.75	6.19	0.00	-0.10	6.09	.36	.23	728	731.0	90.8	-38.0
11.00	6.33	0.00	-0.10	6.23	.35	.23	736	730.6	90.0	-37.4
11.25	6.37	0.00	-0.11	6.26	.35	.22	734	730.1	89.2	-36.9
11.50	6.41	0.00	-0.11	6.30	.35	.22	735	729.7	88.4	-36.4
11.75	6.65	0.00	-0.12	6.53	.33	.21	743	729.3	87.7	-35.8
12.00	7.00	0.00	-0.12	6.88	.31	.18	753	728.8	86.9	-35.3
12.25	6.94	0.00	-0.12	6.82	.31	.19	752	728.4	86.1	-34.8
12.50	6.98	0.00	-0.12	6.86	.31	.19	754	728.0	85.4	-34.2
12.75	7.02	0.00	-0.12	6.90	.30	.18	755	727.5	84.6	-33.7
13.00	6.65	0.00	-0.13	6.52	.33	.21	745	727.1	83.8	-33.1
13.25	6.29	0.00	-0.13	6.16	.35	.25	738	726.7	83.1	-32.6
13.50	6.23	0.00	-0.13	6.10	.35	.25	736	726.2	82.4	-32.1
13.75	6.08	0.00	-0.14	5.94	.36	.26	730	725.8	81.6	-31.5
14.00	6.13	0.00	-0.14	5.99	.36	.26	732	725.3	80.9	-31.0
14.25	5.97	0.00	-0.14	5.83	.37	.27	726	724.9	80.2	-30.5
14.50	7.16	0.00	-0.14	7.02	.29	.19	760	724.5	79.4	-29.9
14.75	8.45	0.00	-0.14	8.31	.21	.10	787	724.0	78.7	-29.4
15.00	12.31	0.00	-0.15	12.16	.04	-16.92	844	723.6	78.0	-28.9
15.25	9.28	0.00	-0.15	9.13	.17	-17.05	804	723.1	77.3	-28.3
15.50	9.54	0.00	-0.16	9.38	.16	.04	807	722.7	76.6	-27.8
15.75	10.32	0.00	-0.16	10.16	.12	.02	817	722.3	75.9	-27.3
16.00	11.52	0.00	-0.16	11.36	.07	-16.97	833	721.8	75.2	-26.7
16.25	10.65	0.00	-0.16	10.49	.11	-17.00	822	721.4	74.5	-26.2
16.50	9.18	0.00	-0.16	9.02	.17	.08	800	720.9	73.8	-25.7
16.75	8.93	0.00	-0.17	8.76	.18	.09	795	720.5	73.1	-25.1
17.00	8.90	0.00	-0.17	8.73	.18	.09	795	720.1	72.4	-24.6
17.25	8.97	0.00	-0.17	8.80	.18	.09	796	719.6	71.7	-24.1
17.50	8.73	0.00	-0.17	8.56	.19	.10	793	719.2	71.0	-23.5
17.75	8.80	0.00	-0.18	8.62	.19	.10	794	718.8	70.3	-23.0
18.00	8.78	0.00	-0.18	8.60	.18	.10	794	718.3	69.7	-22.5
18.25	8.65	0.00	-0.18	8.47	.19	.10	792	717.9	69.0	-21.9
18.50	8.01	0.00	-0.18	7.83	.22	.14	780	717.5	68.3	-21.4
18.75	7.47	0.00	-0.18	7.29	.25	.18	768	717.1	67.6	-20.9
19.00	7.55	0.00	-0.18	7.37	.25	.18	770	716.7	67.0	-20.3
19.25	7.48	0.00	-0.18	7.30	.25	.18	768	716.2	66.3	-19.8
19.50	7.64	0.00	-0.18	7.46	.24	.17	772	715.8	65.6	-19.3
19.75	7.80	0.00	-0.18	7.62	.23	.16	775	715.4	65.0	-18.7
20.00	7.96	0.00	-0.18	7.78	.22	.15	778	715.0	64.3	-18.2
20.25	7.90	0.00	-0.18	7.72	.22	.16	777	714.6	63.7	-17.7
20.50	8.16	0.00	-0.18	7.98	.21	.14	782	714.2	63.0	-17.2
20.75	8.30	0.00	-0.17	8.13	.20	.13	785	713.8	62.3	-16.6
21.00	8.55	0.00	-0.17	8.38	.18	.12	790	713.4	61.7	-16.1
21.25	8.49	0.00	-0.17	8.32	.18	.12	790	713.0	61.0	-15.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38721.50	8.52	0.00	-0.16	8.36	-17.18	-17.12	791	712.6	60.4	-15.0
21.75	8.87	0.00	-0.16	8.71	.16	.10	797	712.3	59.7	-14.5
22.00	10.96	0.00	-0.16	10.80	.06	.01	827	711.9	59.1	-14.0
22.25	13.04	-0.08	-0.15	12.81	-16.98	-16.92	851	711.5	58.4	-13.5
38722.60	16.79	-0.26	-0.15	16.38	-16.86	-16.80	887	711.0	57.5	-12.7
22.80	16.65	-0.35	-0.15	16.15	.86	.81	886	710.7	57.0	-12.3
23.00	15.22	-0.43	-0.14	14.65	.92	.86	870	710.4	56.5	-11.9
23.20	11.38	-0.53	-0.14	10.71	-17.06	-17.01	825	710.1	56.0	-11.4
23.40	8.98	-0.59	-0.14	8.25	.18	.13	787	709.8	55.5	-11.0
23.60	8.83	-0.65	-0.14	8.04	.19	.14	783	709.6	55.0	-10.6
23.80	8.85	-0.70	-0.13	8.01	.19	.15	782	709.3	54.5	-10.2
24.00	8.86	-0.76	-0.12	7.98	.20	.15	781	709.0	53.9	-9.8
24.20	8.70	-0.80	-0.12	7.79	.20	.17	777	708.7	53.4	-9.3
24.40	8.71	-0.83	-0.12	7.76	.21	.17	777	708.5	52.9	-8.9
24.60	8.40	-0.86	-0.11	7.43	.22	.19	770	708.2	52.4	-8.5
24.80	7.92	-0.88	-0.11	6.93	.25	.22	759	707.9	51.9	-8.1
25.00	8.57	-0.91	-0.10	7.55	.21	.18	773	707.7	51.4	-7.7
25.20	8.89	-0.91	-0.10	7.87	.19	.16	780	707.4	50.9	-7.2
25.40	10.16	-0.91	-0.09	9.17	.12	.09	804	707.2	50.4	-6.8
25.60	13.55	-0.91	-0.09	12.55	-16.98	-16.94	848	706.9	49.9	-6.4
25.80	15.48	-0.90	-0.08	14.49	.91	.88	867	706.7	49.4	-6.0
26.00	12.10	-0.89	-0.08	11.13	-17.03	.99	832	706.5	48.9	-5.6
26.20	10.33	-0.87	-0.08	9.37	.11	-17.08	807	706.2	48.4	-5.2
26.40	9.84	-0.86	-0.07	8.90	.13	.10	798	706.0	47.9	-4.7
26.60	9.67	-0.85	-0.06	8.76	.14	.12	795	705.8	47.4	-4.3
26.80	9.98	-0.83	-0.06	9.09	.13	.10	800	705.5	46.9	-3.9
27.00	11.42	-0.81	-0.06	10.55	.06	.03	821	705.3	46.4	-3.5
27.20	12.69	-0.78	-0.05	11.86	.00	-16.97	840	705.1	45.9	-3.1
27.40	11.07	-0.75	-0.04	10.29	.06	-17.03	822	704.9	45.4	-2.6
27.60	10.90	-0.70	-0.04	10.15	.07	.04	819	704.7	44.9	-2.2
27.80	10.88	-0.66	-0.03	10.19	.06	.04	820	704.5	44.4	-1.8
28.00	10.70	-0.60	-0.03	10.08	.06	.04	820	704.3	43.9	-1.4
28.20	10.21	-0.56	-0.02	9.63	.09	.07	810	704.1	43.4	-1.0
28.40	9.22	-0.50	-0.02	8.70	.14	.12	793	703.9	42.9	-0.6
28.60	8.88	-0.46	-0.01	8.41	.16	.14	788	703.7	42.4	-0.2
28.80	9.34	-0.41	0.00	8.93	.13	.11	797	703.5	41.9	0.3
29.00	9.80	-0.37	0.00	9.43	.10	.09	806	703.3	41.4	0.7
29.20	11.54	-0.32	0.01	11.24	.01	-16.99	834	703.2	40.9	1.1
29.40	12.16	-0.26	0.02	11.92	-16.98	.96	845	703.0	40.4	1.5
29.60	11.33	-0.19	0.02	11.16	-17.01	-17.00	833	702.8	39.9	1.9
29.80	10.82	-0.14	0.03	10.72	.04	.03	824	702.7	39.4	2.3
38730.00	10.51	-0.08	0.04	10.46	-17.05	-17.04	821	702.5	38.9	2.7
30.25	10.16	-0.03	0.05	10.18	.06	.05	819	702.3	38.3	3.3
30.50	10.12	0.03	0.06	10.21	.05	.04	821	702.1	37.6	3.8
30.75	10.18	0.13	0.07	10.38	.04	.03	823	702.0	37.0	4.3
31.00	10.14	0.19	0.08	10.41	.05	.04	822	701.8	36.4	4.8
31.25	10.10	0.28	0.10	10.48	.05	.04	822	701.6	35.8	5.3
31.50	9.85	0.34	0.11	10.29	.05	.05	819	701.5	35.2	5.8
31.75	9.80	0.42	0.12	10.34	.05	.05	819	701.3	34.5	6.4
32.00	9.85	0.50	0.13	10.49	.05	.04	820	701.2	33.9	6.9
32.25	9.70	0.58	0.14	10.42	.05	.04	820	701.1	33.3	7.4
32.50	9.44	0.66	0.15	10.25	.06	.05	818	700.9	32.7	7.9
32.75	9.18	0.75	0.16	10.09	.06	.06	817	700.8	32.1	8.4
33.00	9.02	0.83	0.17	10.02	.06	.06	817	700.7	31.5	8.9
33.25	8.97	0.91	0.18	10.06	.06	.06	816	700.6	30.9	9.4
33.50	9.01	1.01	0.20	10.22	.06	.06	816	700.5	30.2	9.9
33.75	9.26	1.09	0.21	10.56	.04	.04	821	700.4	29.6	10.4
34.00	9.20	1.19	0.22	10.61	.04	.03	823	700.3	29.0	11.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38734.25	8.83	1.28	0.23	10.34	-17.05	-17.05	819	700.3	28.4	11.5
34.50	8.66	1.37	0.24	10.26	.05	.05	817	700.2	27.8	12.0
34.75	8.49	1.45	0.25	10.19	.06	.06	815	700.1	27.2	12.5
35.00	8.11	1.56	0.26	9.93	.07	.07	812	700.1	26.5	13.0
35.25	7.94	1.65	0.27	9.86	.07	.07	810	700.0	25.9	13.5
35.50	7.87	1.74	0.28	9.90	.07	.07	810	700.0	25.3	14.0
35.75	7.70	1.85	0.30	9.85	.07	.08	810	700.0	24.7	14.5
36.00	7.63	1.92	0.31	9.86	.07	.07	811	699.9	24.1	15.0
36.25	7.66	2.03	0.32	10.00	.06	.06	814	699.9	23.5	15.5
36.50	7.58	2.12	0.34	10.04	.06	.06	813	699.9	22.9	16.0
36.75	8.33	2.21	0.35	10.88	.02	.02	827	699.9	22.3	16.5
37.00	10.00	2.30	0.36	12.66	-16.95	-16.95	849	699.9	21.6	17.0
37.25	9.71	2.40	0.37	12.48	.96	.96	847	700.0	21.0	17.5
37.50	8.81	2.50	0.38	11.69	.99	.99	835	700.0	20.4	18.0
37.75	8.11	2.59	0.40	11.10	-17.02	-17.02	826	700.0	19.8	18.5
38.00	7.93	2.67	0.41	11.01	.03	.03	824	700.1	19.2	19.0
38.25	7.84	2.77	0.42	11.04	.03	.03	824	700.1	18.6	19.5
38.50	7.76	2.86	0.44	11.06	.03	.02	825	700.2	18.0	20.1
38.75	7.47	2.96	0.45	10.88	.03	.03	822	700.2	17.3	20.6
39.00	7.38	3.06	0.46	10.90	.03	.03	822	700.3	16.7	21.1
39.25	7.39	3.15	0.48	11.03	.03	.03	825	700.4	16.1	21.6
39.50	7.20	3.25	0.49	10.94	.03	.03	823	700.4	15.5	22.0
39.75	7.21	3.35	0.50	11.07	.03	.03	823	700.5	14.9	22.5
40.00	6.92	3.45	0.52	10.88	.04	.04	821	700.6	14.3	23.0
40.25	6.93	3.56	0.52	11.01	.03	.03	822	700.7	13.7	23.5
40.50	6.63	3.66	0.54	10.83	.04	.04	820	700.9	13.0	24.0
40.75	6.33	3.75	0.55	10.63	.05	.04	817	701.0	12.4	24.5
41.00	6.03	3.86	0.56	10.45	.06	.05	815	701.1	11.8	25.0
41.25	5.52	3.95	0.57	10.04	.07	.07	808	701.3	11.2	25.5
41.50	4.81	4.04	0.58	9.42	.10	.10	798	701.4	10.6	26.0
41.75	4.50	4.14	0.59	9.23	.11	.11	795	701.6	10.0	26.5
42.00	4.51	4.24	0.60	9.34	.11	.10	797	701.7	9.4	27.0
42.25	4.72	4.33	0.62	9.67	.09	.09	802	701.9	8.7	27.5
42.50	5.13	4.41	0.63	10.17	.07	.06	809	702.1	8.1	28.0
42.75	7.09	4.51	0.64	12.24	-16.99	-16.98	837	702.2	7.5	28.5
43.00	8.01	4.60	0.65	13.27	.95	.94	849	702.4	6.9	29.0
43.25	6.37	4.70	0.66	11.73	-17.01	-17.00	830	702.6	6.3	29.5
43.50	6.16	4.77	0.67	11.60	.02	.00	828	702.8	5.7	30.0
43.75	5.95	4.88	0.68	11.51	.02	.01	827	703.0	5.1	30.5
44.00	6.36	4.96	0.70	12.03	.00	-16.99	833	703.2	4.4	30.9
44.25	7.18	5.04	0.71	12.94	-16.97	.95	845	703.5	3.8	31.4
44.50	5.54	5.15	0.72	11.41	-17.03	-17.01	826	703.7	3.2	31.9
44.75	5.33	5.24	0.73	11.30	.03	.02	823	703.9	2.6	32.4
45.00	5.73	5.32	0.74	11.79	.01	.00	829	704.2	2.0	32.9
45.25	6.14	5.42	0.75	12.31	.00	-16.98	836	704.4	1.3	33.4
45.50	6.85	5.50	0.76	13.11	-16.97	.95	845	704.7	0.7	33.9
45.75	6.74	5.59	0.77	13.12	.97	.95	846	704.9	0.1	34.4
46.00	7.25	5.66	0.79	13.71	.95	.93	852	705.2	359.5	34.9
46.25	6.42	5.76	0.80	12.98	.98	.95	844	705.5	358.9	35.3
46.50	6.11	5.82	0.81	12.74	.98	.96	842	705.7	358.3	35.8
46.75	5.07	5.92	0.82	11.81	-17.02	.99	829	706.0	357.6	36.3
47.00	5.27	5.99	0.83	12.09	.01	.98	832	706.3	357.0	36.8
47.25	5.15	6.07	0.84	12.07	.01	.98	832	706.6	356.4	37.3
47.50	5.14	6.14	0.85	12.13	.01	.98	832	706.9	355.8	37.8
47.75	5.03	6.23	0.87	12.13	.01	.98	833	707.2	355.1	38.2
48.00	5.02	6.31	0.88	12.21	.01	.98	834	707.5	354.5	38.7
48.25	4.70	6.38	0.89	11.97	.02	.98	830	707.8	353.9	39.2
48.50	4.59	6.44	0.90	11.93	.02	.99	829	708.2	353.3	39.7
48.75	5.50	6.54	0.91	12.95	-16.98	.95	842	708.5	352.7	40.2
49.00	5.90	6.60	0.92	13.42	.97	.93	847	708.8	352.0	40.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38749.25	4.65	6.67	0.93	12.26	-17.01	-16.97	834	709.2	351.4	41.1
49.50	4.44	6.76	0.94	12.13	.01	.97	835	709.5	350.8	41.6
49.75	4.11	6.82	0.95	11.89	.02	.98	831	709.8	350.1	42.1
50.00	3.90	6.91	0.96	11.76	.03	.99	827	710.2	349.5	42.6
50.25	3.37	6.99	0.97	11.33	.04	-17.00	821	710.5	348.9	43.0
50.50	3.15	7.05	0.98	11.18	.05	.01	820	710.8	348.3	43.5
50.75	2.73	7.14	0.99	10.85	.06	.02	814	711.3	347.6	44.0
51.00	2.51	7.22	1.00	10.73	.06	.02	813	711.6	347.0	44.5
51.25	1.98	7.27	1.01	10.26	.08	.04	806	712.0	346.4	44.9
51.50	1.45	7.36	1.02	9.83	.10	.06	800	712.4	345.7	45.4
51.75	1.33	7.40	1.02	9.75	.10	.06	799	712.7	345.1	45.9
52.00	1.11	7.46	1.03	9.61	.11	.07	796	713.1	344.5	46.4
52.25	0.89	7.54	1.04	9.47	.12	.07	792	713.5	343.8	46.8
52.50	0.78	7.59	1.05	9.42	.12	.07	789	713.9	343.2	47.3
52.75	0.76	7.66	1.05	9.47	.12	.07	791	714.3	342.6	47.8
53.00	0.54	7.72	1.06	9.33	.12	.07	791	714.7	341.9	48.3
53.25	0.43	7.78	1.06	9.26	.12	.08	791	715.1	341.3	48.7
53.50	0.10	7.86	1.07	9.03	.13	.08	787	715.5	340.7	49.2
53.75	-0.22	7.89	1.07	8.74	.15	.10	780	715.9	340.0	49.7
54.00	-0.23	7.98	1.08	8.82	.15	.09	779	716.3	339.4	50.1
54.25	-0.35	8.03	1.08	8.76	.15	.10	780	716.7	338.7	50.6
54.50	-0.57	8.09	1.09	8.61	.15	.10	779	717.1	338.1	51.1
54.75	-0.79	8.12	1.09	8.43	.16	.11	772	717.5	337.5	51.5
55.00	-0.90	8.20	1.10	8.39	.17	.11	766	717.9	336.8	52.0
55.25	-0.20	8.23	1.10	9.13	.14	.08	780	718.3	336.2	52.5
55.50	0.10	8.29	1.11	9.50	.12	.06	793	718.7	335.5	52.9
55.75	-0.43	8.33	1.11	9.01	.13	.08	787	719.1	334.9	53.4
56.00	-0.65	8.40	1.12	8.87	.14	.08	782	719.5	334.2	53.9
56.25	-0.76	8.41	1.12	8.77	.14	.08	782	720.0	333.6	54.3
56.50	-1.08	8.46	1.12	8.50	.16	.10	777	720.4	332.9	54.8
56.75	-1.51	8.50	1.12	8.12	.18	.11	768	720.8	332.3	55.3
57.00	-1.72	8.53	1.13	7.94	.19	.12	761	721.2	331.6	55.7
57.25	-1.84	8.59	1.13	7.88	.19	.13	757	721.6	331.0	56.2
57.50	-1.75	8.62	1.14	8.01	.18	.12	763	722.1	330.3	56.7
57.75	-1.76	8.65	1.14	8.03	.18	.11	766	722.5	329.6	57.1
58.00	-1.87	8.70	1.14	7.97	.19	.12	759	722.9	329.0	57.6
58.25	-1.88	8.72	1.14	7.99	.19	.12	757	723.3	328.3	58.0
58.50	-1.78	8.74	1.14	8.10	.18	.11	759	723.7	327.7	58.5
58.75	-1.28	8.80	1.14	8.66	.15	.08	774	724.2	327.0	59.0
38759.00	-1.37	8.83	1.14	8.59	-17.15	-17.08	774	724.6	326.3	59.4
59.50	-1.10	8.88	1.14	8.92	.13	.06	785	725.4	325.0	60.3
60.00	-1.15	8.92	1.15	8.92	.13	.06	786	726.3	323.6	61.2
60.50	-1.27	8.94	1.14	8.81	.14	.06	782	727.1	322.3	62.2
61.00	-1.56	8.95	1.14	8.53	.15	.07	776	727.9	320.9	63.1
61.50	-1.67	8.97	1.14	8.44	.16	.08	773	728.7	319.6	64.0
62.00	-1.71	8.97	1.14	8.39	.16	.08	768	729.5	318.2	64.9
62.50	-1.49	8.97	1.14	8.61	.16	.07	769	730.3	316.8	65.8
63.00	-1.70	8.95	1.13	8.38	.17	.08	759	731.1	315.4	66.7
63.50	-1.42	8.95	1.12	8.66	.15	.06	770	731.9	314.0	67.6
64.00	-1.20	8.93	1.12	8.85	.14	.04	780	732.7	312.6	68.4
64.50	-1.16	8.92	1.11	8.87	.13	.04	781	733.5	311.1	69.3
65.00	-1.08	8.90	1.11	8.93	.13	.04	782	734.3	309.7	70.2
65.50	-1.08	8.85	1.10	8.87	.13	.04	782	735.0	308.2	71.1
66.00	-1.04	8.83	1.09	8.88	.13	.03	784	735.7	306.7	72.0
66.50	-0.97	8.80	1.08	8.90	.13	.03	784	736.5	305.2	72.9
67.00	-0.92	8.72	1.07	8.87	.13	.03	784	737.2	303.7	73.7
67.50	-0.79	8.67	1.06	8.94	.13	.02	785	737.9	302.2	74.6
68.00	-0.58	8.60	1.04	9.06	.12	.02	785	738.5	300.6	75.5
68.50	-0.35	8.50	1.03	9.18	.12	.01	785	739.2	299.0	76.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38769.00	-0.08	8.41	1.01	9.34	-17.11	-17.00	790	739.9	297.4	77.2
69.50	0.18	8.29	0.99	9.47	.10	-16.99	796	740.5	295.8	78.0
70.00	0.40	8.19	0.98	9.56	.09	.98	799	741.1	294.1	78.9
70.50	0.38	8.05	0.96	9.39	.10	.99	795	741.7	292.4	79.7
71.00	0.32	7.90	0.94	9.17	.11	-17.00	790	742.3	290.7	80.6
71.50	-0.01	7.77	0.92	8.67	.13	.02	779	742.9	288.9	81.4
72.00	-0.04	7.62	0.90	8.48	.14	.03	775	743.4	287.1	82.2
72.50	0.33	7.45	0.87	8.65	.13	.02	777	744.0	285.3	83.1
73.00	0.65	7.28	0.85	8.78	.13	.01	777	744.5	283.4	83.9
73.50	0.51	7.14	0.83	8.48	.15	.02	769	745.0	281.4	84.7
74.00	0.51	6.95	0.81	8.26	.15	.03	766	745.4	279.4	85.5
74.50	0.63	6.75	0.78	8.16	.16	.04	764	745.9	277.3	86.3
75.00	0.74	6.57	0.75	8.06	.16	.04	763	746.3	275.2	87.1
75.50	0.85	6.34	0.73	7.92	.17	.05	759	746.7	272.9	87.8
76.00	0.91	6.15	0.71	7.77	.18	.05	755	747.1	270.6	88.6
76.50	1.08	5.94	0.68	7.70	.18	.06	754	747.5	268.2	89.3
77.00	1.25	5.73	0.66	7.64	.18	.06	753	747.8	265.7	90.1
77.50	1.43	5.49	0.63	7.55	.19	.06	749	748.2	263.0	90.8
78.00	1.71	5.25	0.61	7.58	.19	.06	749	748.5	260.3	91.5
78.50	1.90	5.03	0.58	7.51	.19	.06	749	748.7	257.4	92.2
79.00	1.98	4.78	0.55	7.31	.20	.07	743	749.0	254.3	92.8
79.50	2.14	4.54	0.53	7.21	.21	.08	741	749.2	251.0	93.5
80.00	2.59	4.30	0.50	7.39	.19	.07	747	749.4	247.6	94.1
80.50	2.99	4.05	0.47	7.50	.19	.06	751	749.6	243.9	94.7
81.00	3.34	3.79	0.44	7.57	.18	.05	752	749.8	240.0	95.2
81.50	3.80	3.56	0.41	7.77	.17	.04	758	749.9	235.9	95.7
38781.75	3.95	3.43	0.40	7.77	-17.17	-17.04	761	750.0	233.7	95.9
82.00	4.25	3.29	0.38	7.92	.16	.03	766	750.0	231.4	96.2
82.25	5.28	3.16	0.37	8.81	.12	-16.98	789	750.0	229.1	96.4
82.50	5.59	3.05	0.35	8.99	.11	.97	789	750.1	226.7	96.6
82.75	4.56	2.93	0.34	7.83	.17	-17.03	756	750.1	224.3	96.7
83.00	4.56	2.83	0.32	7.71	.18	.04	757	750.1	221.8	96.9
83.25	4.46	2.68	0.31	7.45	.19	.06	750	750.1	219.2	97.1
38783.50	4.64	2.54	0.29	7.47	-17.19	-17.06	752	750.2	216.5	97.2
84.00	4.77	2.31	0.26	7.34	.20	.06	749	750.2	211.0	97.4
84.50	4.87	2.05	0.24	7.16	.21	.08	745	750.1	205.3	97.5
85.00	5.01	1.80	0.20	7.01	.22	.09	741	750.1	199.4	97.6
85.50	5.17	1.57	0.18	6.92	.22	.09	738	750.0	193.4	97.6
86.00	5.28	1.30	0.15	6.73	.23	.10	733	749.9	187.3	97.4
86.50	5.44	1.05	0.12	6.62	.24	.11	729	749.7	181.3	97.2
87.00	5.63	0.84	0.09	6.57	.24	.11	727	749.6	175.3	96.9
87.50	5.85	0.62	0.06	6.53	.25	.12	726	749.4	169.6	96.6
88.00	6.12	0.41	0.03	6.56	.24	.11	726	749.2	164.1	96.1
88.50	6.39	0.20	-0.01	6.58	.24	.11	729	748.9	158.8	95.6
89.00	6.63	-0.02	-0.04	6.57	.24	.11	729	748.7	153.8	95.0
89.50	6.90	-0.21	-0.07	6.62	.24	.11	731	748.4	149.1	94.4
90.00	7.20	-0.41	-0.10	6.69	.24	.11	734	748.0	144.6	93.7
90.50	7.47	-0.58	-0.14	6.75	.23	.10	737	747.7	140.4	92.9
91.00	7.63	-0.75	-0.17	6.72	.23	.11	738	747.3	136.5	92.1
91.50	7.75	-0.89	-0.20	6.65	.24	.11	737	746.9	132.9	91.3
92.00	7.84	-1.06	-0.23	6.54	.25	.12	732	746.5	129.4	90.5
92.50	7.95	-1.23	-0.26	6.46	.25	.13	729	746.0	126.1	89.6
93.00	8.04	-1.37	-0.29	6.38	.26	.13	729	745.5	123.1	88.7
38793.25	7.84	-1.45	-0.31	6.08	-17.28	-17.16	718	745.3	121.6	88.2
93.50	7.63	-1.49	-0.32	5.82	.30	.17	707	745.0	120.1	87.7
93.75	7.74	-1.58	-0.33	5.83	.29	.17	709	744.7	118.7	87.3
94.00	7.85	-1.66	-0.35	5.84	.29	.17	709	744.5	117.4	86.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38794.25	8.06	-1.71	-0.36	5.98	-17.29	-17.16	713	744.2	116.1	86.3
94.50	8.37	-1.79	-0.37	6.21	.27	.15	722	743.9	114.8	85.8
94.75	8.78	-1.84	-0.39	6.55	.25	.13	735	743.6	113.5	85.3
95.00	8.89	-1.89	-0.40	6.60	.24	.12	736	743.4	112.3	84.8
95.25	10.23	-1.97	-0.42	7.84	.17	.05	771	743.1	111.0	84.4
95.50	10.23	-2.01	-0.44	7.78	.18	.05	767	742.8	109.9	83.9
95.75	9.82	-2.09	-0.45	7.28	.21	.08	753	742.4	108.7	83.4
96.00	9.82	-2.11	-0.46	7.25	.21	.09	753	742.1	107.6	82.8
96.25	9.62	-2.15	-0.47	6.99	.22	.10	746	741.8	106.5	82.3
96.50	8.90	-2.21	-0.48	6.21	.27	.15	722	741.5	105.4	81.8
96.75	8.59	-2.26	-0.49	5.84	.30	.18	708	741.2	104.3	81.3
97.00	8.79	-2.30	-0.50	5.99	.29	.17	712	740.8	103.2	80.8
97.25	9.92	-2.34	-0.52	7.06	.22	.10	749	740.5	102.2	80.3
97.50	10.74	-2.41	-0.53	7.81	.17	.06	774	740.2	101.2	79.8
97.75	11.46	-2.44	-0.54	8.48	.14	.02	789	739.8	100.2	79.3
98.00	11.46	-2.50	-0.55	8.41	.15	.03	782	739.5	99.2	78.7
98.25	11.86	-2.55	-0.56	8.75	.14	.01	788	739.1	98.2	78.2
98.50	12.66	-2.62	-0.57	9.47	.11	-16.97	802	738.7	97.3	77.7
98.75	13.46	-2.66	-0.58	10.22	.08	.94	818	738.4	96.3	77.2
99.00	13.34	-2.72	-0.59	10.03	.08	.95	818	738.0	95.4	76.6
99.25	13.32	-2.79	-0.61	9.92	.08	.96	822	737.6	94.5	76.1
99.50	12.68	-2.84	-0.62	9.22	.10	.99	811	737.3	93.6	75.6
99.75	11.22	-2.90	-0.63	7.68	.18	-17.07	771	736.9	92.7	75.0
38800.00	11.09	-2.95	-0.64	7.50	.20	.08	756	736.5	91.8	74.5
00.25	11.07	-3.05	-0.65	7.37	.22	.09	740	736.1	91.0	74.0
00.50	10.73	-3.10	-0.66	6.97	.23	.12	744	735.7	90.1	73.4
00.75	10.71	-3.17	-0.68	6.86	.24	.13	740	735.3	89.2	72.9
01.00	10.79	-3.24	-0.69	6.86	.24	.13	737	734.9	88.4	72.3
01.25	10.97	-3.32	-0.70	6.95	.23	.12	742	734.5	87.6	71.8
01.50	11.05	-3.38	-0.71	6.95	.24	.12	740	734.1	86.8	71.2
01.75	11.33	-3.47	-0.72	7.14	.22	.11	746	733.7	85.9	70.7
02.00	11.62	-3.53	-0.73	7.35	.21	.10	755	733.3	85.1	70.2
02.25	12.00	-3.60	-0.74	7.66	.19	.08	766	732.9	84.3	69.6
02.50	11.57	-3.69	-0.75	7.13	.22	.11	748	732.5	83.5	69.1
02.75	11.44	-3.77	-0.76	6.90	.23	.13	742	732.1	82.8	68.5
03.00	11.31	-3.85	-0.77	6.69	.25	.14	736	731.7	82.0	68.0
03.25	11.18	-3.93	-0.78	6.47	.26	.16	728	731.3	81.2	67.4
03.50	10.95	-4.01	-0.79	6.14	.28	.18	719	730.8	80.5	66.9
03.75	10.92	-4.08	-0.80	6.05	.28	.19	719	730.4	79.7	66.3
04.00	11.10	-4.17	-0.80	6.13	.28	.19	726	730.0	78.9	65.8
04.25	11.39	-4.25	-0.81	6.33	.26	.17	735	729.6	78.2	65.2
04.50	11.57	-4.34	-0.82	6.40	.26	.17	735	729.2	77.5	64.7
04.75	11.85	-4.40	-0.83	6.61	.25	.16	740	728.7	76.7	64.1
05.00	12.23	-4.49	-0.84	6.91	.23	.14	748	728.3	76.0	63.6
38805.50	12.23	-4.76	-0.85	6.62	-17.25	-17.16	732	727.4	74.6	62.4
06.00	12.52	-4.81	-0.86	6.84	.24	.15	738	726.6	73.1	61.3
06.50	12.82	-4.96	-0.87	6.99	.23	.14	745	725.7	71.7	60.2
07.00	13.08	-5.11	-0.88	7.09	.22	.13	747	724.8	70.3	59.1
07.50	13.29	-5.24	-0.89	7.16	.21	.13	752	724.0	69.0	58.0
08.00	13.37	-5.37	-0.89	7.11	.21	.13	754	723.1	67.6	56.9
08.50	13.40	-5.50	-0.90	7.00	.22	.14	753	722.3	66.3	55.7
09.00	13.46	-5.61	-0.90	6.95	.22	.15	753	721.4	64.9	54.6
09.50	13.59	-5.73	-0.90	6.96	.22	.15	754	720.6	63.6	53.5
10.00	13.86	-5.82	-0.90	7.14	.21	.14	756	719.7	62.3	52.4
10.50	14.25	-5.92	-0.90	7.44	.19	.12	764	718.9	61.0	51.2
11.00	14.47	-6.01	-0.89	7.57	.18	.12	767	718.0	59.7	50.1
38811.50	14.82	-6.09	-0.88	7.85	-17.17	-17.10	773	717.2	58.4	49.0
11.75	14.90	-6.12	-0.88	7.91	.16	.10	775	716.8	57.8	48.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38812.00	15.20	-6.13	-0.88	8.19	-17.15	-17.08	781	716.4	57.1	47.9
12.25	17.03	-6.16	-0.88	9.99	.06	.00	815	716.0	56.5	47.3
12.50	18.04	-6.19	-0.87	10.98	.02	-16.95	831	715.6	55.9	46.7
12.75	16.07	-6.20	-0.87	9.00	.11	-17.04	796	715.2	55.3	46.2
13.00	14.62	-6.21	-0.86	7.55	.18	.12	763	714.9	54.6	45.6
13.25	14.50	-6.21	-0.86	7.43	.19	.13	761	714.5	54.0	45.0
13.50	14.39	-6.21	-0.86	7.31	.19	.14	759	714.1	53.4	44.5
13.75	14.48	-6.21	-0.85	7.41	.18	.13	764	713.7	52.8	43.9
14.00	14.57	-6.20	-0.85	7.51	.18	.13	765	713.3	52.1	43.3
14.25	15.27	-6.20	-0.84	8.23	.14	.09	781	713.0	51.5	42.8
14.50	16.80	-6.19	-0.84	9.77	.06	.01	811	712.6	50.9	42.2
14.75	19.06	-6.18	-0.83	12.05	-16.97	-16.92	845	712.3	50.3	41.6
15.00	18.74	-6.16	-0.83	11.75	.98	.92	842	711.9	49.7	41.1
15.25	16.67	-6.14	-0.82	9.72	-17.06	-17.01	812	711.6	49.1	40.5
15.50	16.36	-6.12	-0.82	9.42	.08	.03	805	711.2	48.5	39.9
15.75	16.46	-6.09	-0.81	9.56	.07	.02	807	710.9	47.8	39.3
16.00	17.68	-6.06	-0.80	10.82	.01	-16.97	828	710.6	47.2	38.8
16.25	17.78	-6.03	-0.79	10.96	.01	.96	830	710.2	46.6	38.2
16.50	17.78	-6.01	-0.78	10.96	.00	.96	831	709.9	46.0	37.6
16.75	17.77	-5.97	-0.78	11.02	.00	.96	830	709.6	45.4	37.1
17.00	17.77	-5.94	-0.77	11.06	.00	.96	831	709.3	44.8	36.5
17.25	17.56	-5.90	-0.76	10.91	.01	.97	829	709.0	44.2	35.9
17.50	17.46	-5.85	-0.76	10.85	.01	.97	828	708.7	43.6	35.4
17.75	17.50	-5.81	-0.75	10.94	.00	.97	829	708.4	43.0	34.8
18.00	17.42	-5.76	-0.74	10.92	.01	.97	828	708.2	42.4	34.2
18.25	17.44	-5.72	-0.73	10.99	.00	.97	829	707.9	41.8	33.7
18.50	17.34	-5.66	-0.72	10.95	.00	.97	828	707.6	41.2	33.1
18.75	17.43	-5.60	-0.71	11.12	-16.99	.96	831	707.4	40.6	32.5
19.00	17.51	-5.55	-0.70	11.26	.99	.96	833	707.1	40.0	31.9
19.25	17.38	-5.50	-0.69	11.19	.99	.96	832	706.9	39.5	31.4
19.50	17.44	-5.43	-0.68	11.33	.99	.96	833	706.7	38.9	30.8
19.75	17.69	-5.36	-0.67	11.66	.97	.94	837	706.4	38.3	30.2
20.00	17.73	-5.30	-0.66	11.77	.97	.94	839	706.2	37.7	29.7
20.25	17.45	-5.23	-0.64	11.57	.97	.95	836	706.0	37.1	29.1
20.50	17.26	-5.18	-0.63	11.45	.98	.95	834	705.8	36.5	28.5
20.75	17.16	-5.09	-0.62	11.45	.98	.95	835	705.6	35.9	28.0
21.00	17.57	-5.03	-0.61	11.92	.96	.93	841	705.5	35.3	27.4
21.25	18.17	-4.96	-0.60	12.61	.94	.91	848	705.3	34.8	26.8
21.50	18.14	-4.90	-0.58	12.66	.93	.91	848	705.1	34.2	26.2
21.75	18.11	-4.82	-0.57	12.71	.93	.91	850	705.0	33.6	25.7
22.00	18.27	-4.74	-0.56	12.97	.92	.89	854	704.9	33.0	25.1
22.25	18.62	-4.68	-0.54	13.41	.90	.88	859	704.7	32.4	24.5
22.50	19.59	-4.60	-0.53	14.45	.87	.84	870	704.6	31.8	24.0
22.75	20.23	-4.52	-0.52	15.19	.84	.82	878	704.5	31.3	23.4
23.00	24.26	-4.41	-0.50	19.34	.74	.71	912	704.4	30.7	22.8
23.25	25.09	-4.34	-0.49	20.26	.71	.69	919	704.3	30.1	22.2
23.50	24.37	-4.26	-0.48	19.63	.73	.71	914	704.2	29.5	21.7
23.75	22.00	-4.17	-0.46	17.37	.79	.77	893	704.1	28.9	21.1
24.00	20.86	-4.09	-0.45	16.32	.82	.80	882	704.1	28.4	20.5
24.25	20.52	-3.98	-0.44	16.10	.83	.81	879	704.0	27.8	20.0
24.50	19.88	-3.89	-0.42	15.57	.84	.83	875	704.0	27.2	19.4
24.75	18.60	-3.79	-0.41	14.40	.88	.86	865	703.9	26.6	18.8
25.00	17.22	-3.69	-0.39	13.14	.92	.90	851	703.9	26.1	18.2
25.25	16.75	-3.59	-0.38	12.78	.93	.91	846	703.9	25.5	17.7
25.50	16.58	-3.48	-0.36	12.75	.93	.92	845	703.9	24.9	17.1
25.75	16.51	-3.39	-0.34	12.78	.93	.92	845	703.9	24.3	16.5
26.00	17.15	-3.29	-0.33	13.53	.91	.89	854	703.9	23.8	16.0
26.25	18.81	-3.20	-0.31	15.31	.85	.83	872	704.0	23.2	15.4
26.50	18.82	-3.07	-0.30	15.45	.85	.83	873	704.0	22.6	14.8
26.75	18.11	-2.97	-0.28	14.85	.86	.85	867	704.1	22.0	14.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38827.00	16.56	-2.87	-0.26	13.43	-16.91	-16.89	852	704.1	21.5	13.7
27.25	15.73	-2.76	-0.25	12.71	.94	.92	843	704.2	20.9	13.1
27.50	15.30	-2.65	-0.23	12.42	.95	.93	840	704.3	20.3	12.5
27.75	15.07	-2.56	-0.22	12.29	.95	.93	838	704.4	19.8	12.0
28.00	14.63	-2.45	-0.20	11.98	.97	.95	834	704.5	19.2	11.4
28.25	14.29	-2.35	-0.18	11.75	.98	.96	831	704.6	18.6	10.8
28.50	13.63	-2.24	-0.17	11.22	-17.00	.97	824	704.7	18.1	10.2
28.75	13.27	-2.13	-0.15	10.99	.01	.98	821	704.8	17.5	9.7
29.00	12.91	-2.03	-0.14	10.74	.02	.99	817	705.0	16.9	9.1
29.25	12.54	-1.91	-0.12	10.51	.03	-17.01	813	705.1	16.3	8.5
29.50	12.38	-1.80	-0.10	10.48	.03	.01	812	705.3	15.8	7.9
29.75	12.10	-1.70	-0.09	10.31	.04	.02	809	705.4	15.2	7.4
30.00	11.51	-1.59	-0.08	9.85	.06	.04	802	705.6	14.6	6.8
30.25	11.23	-1.47	-0.06	9.70	.07	.04	800	705.8	14.1	6.2
30.50	11.20	-1.37	-0.04	9.79	.06	.04	801	706.0	13.5	5.7
30.75	10.54	-1.26	-0.02	9.26	.09	.06	792	706.2	12.9	5.1
31.00	9.94	-1.14	0.00	8.80	.11	.08	783	706.4	12.4	4.5
31.25	9.74	-1.04	0.01	8.71	.12	.09	781	706.6	11.8	3.9
31.50	10.05	-0.94	0.03	9.14	.10	.07	789	706.8	11.2	3.4
31.75	10.25	-0.82	0.05	9.48	.08	.05	794	707.1	10.7	2.8
32.00	10.14	-0.70	0.06	9.50	.08	.05	795	707.3	10.1	2.2
32.25	11.88	-0.59	0.08	11.37	.01	-16.97	822	707.6	9.5	1.6
32.50	12.17	-0.48	0.09	11.78	-16.99	.95	828	707.8	9.0	1.1
32.75	12.05	-0.37	0.11	11.80	.99	.95	829	708.1	8.4	0.5
33.00	10.60	-0.25	0.12	10.47	-17.04	-17.00	810	708.4	7.8	-0.1
33.25	10.16	-0.13	0.14	10.18	.06	.02	804	708.7	7.3	-0.7
33.50	9.83	-0.03	0.16	9.96	.07	.03	801	709.0	6.7	-1.2
33.75	9.49	0.11	0.18	9.78	.08	.04	799	709.3	6.1	-1.8
34.00	9.16	0.22	0.19	9.57	.09	.04	796	709.6	5.5	-2.4
34.25	9.43	0.34	0.21	9.98	.07	.02	803	709.9	5.0	-2.9
38839.50	5.70	2.68	0.54	8.92	-17.14	-17.07	779	717.9	353.0	-15.1
40.00	5.45	2.91	0.58	8.94	.15	.07	779	718.8	351.8	-16.2
40.50	5.40	3.11	0.61	9.12	.14	.06	781	719.7	350.7	-17.4
41.00	5.44	3.34	0.64	9.42	.13	.04	786	720.6	349.5	-18.5
41.50	5.35	3.54	0.68	9.58	.12	.04	789	721.5	348.4	-19.7
42.00	5.44	3.75	0.71	9.90	.11	.02	793	722.5	347.2	-20.8
42.50	6.12	3.96	0.74	10.82	.08	-16.97	807	723.4	346.1	-22.0
43.00	6.20	4.14	0.77	11.11	.07	.96	810	724.4	344.9	-23.1
43.50	5.87	4.34	0.80	11.01	.08	.97	808	725.4	343.7	-24.3
44.00	5.51	4.53	0.82	10.86	.08	.97	806	726.4	342.6	-25.4
44.50	5.05	4.71	0.85	10.60	.10	.98	801	727.5	341.4	-26.6
45.00	4.46	4.90	0.88	10.23	.11	-17.00	795	728.5	340.2	-27.8
45.50	3.87	5.07	0.90	9.83	.13	.01	788	729.5	339.0	-28.9
46.00	3.44	5.21	0.92	9.57	.14	.03	784	730.6	337.9	-30.1
46.50	2.72	5.36	0.94	9.02	.17	.05	773	731.7	336.7	-31.2
47.00	1.99	5.52	0.97	8.47	.20	.08	762	732.7	335.5	-32.4
47.50	1.64	5.66	0.99	8.30	.20	.09	759	733.8	334.3	-33.5
48.00	1.27	5.81	1.00	8.08	.21	.10	756	734.9	333.1	-34.7
48.50	1.04	5.95	1.01	8.00	.22	.10	754	736.0	331.9	-35.8
49.00	0.79	6.07	1.03	7.89	.22	.11	752	737.1	330.7	-37.0
49.50	0.49	6.21	1.04	7.74	.23	.11	751	738.2	329.4	-38.1
50.00	0.25	6.34	1.05	7.64	.24	.12	748	739.3	328.2	-39.3
50.50	-0.01	6.46	1.06	7.51	.25	.12	742	740.4	327.0	-40.4
51.00	-0.28	6.57	1.07	7.36	.26	.13	738	741.6	325.7	-41.6
51.50	-0.50	6.68	1.08	7.27	.26	.13	736	742.7	324.5	-42.7
52.00	-0.75	6.79	1.09	7.13	.27	.14	734	743.8	323.2	-43.9
52.50	-1.07	6.86	1.10	6.90	.28	.15	728	744.9	321.9	-45.0
53.00	-1.35	6.95	1.10	6.70	.29	.16	722	746.0	320.7	-46.1

Tablé 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38853.50	-1.36	7.02	1.11	6.77	-17.29	-17.16	724	747.1	319.4	-47.3
54.00	-1.28	7.07	1.12	6.91	.28	.15	727	748.2	318.1	-48.4
54.50	-1.42	7.14	1.12	6.83	.29	.15	718	749.3	316.8	-49.6
55.00	-1.52	7.19	1.12	6.79	.29	.15	716	750.4	315.4	-50.7
55.50	-1.61	7.23	1.12	6.75	.29	.15	722	751.5	314.1	-51.9
38856.00	-1.65	7.26	1.12	6.74	-17.29	-17.15	724	752.6	312.8	-53.0
56.25	-1.78	7.27	1.13	6.62	.30	.16	715	753.1	312.1	-53.6
56.50	-1.60	7.28	1.12	6.80	.29	.14	719	753.6	311.4	-54.1
56.75	-1.00	7.28	1.12	7.40	.26	.10	737	754.2	310.7	-54.7
57.00	-0.70	7.29	1.13	7.72	.24	.08	744	754.7	310.0	-55.3
57.25	-1.22	7.29	1.12	7.19	.27	.11	723	755.2	309.3	-55.8
57.50	-1.22	7.29	1.12	7.19	.27	.11	725	755.7	308.6	-56.4
57.75	-1.21	7.29	1.12	7.20	.27	.11	730	756.2	307.9	-57.0
58.00	-1.20	7.28	1.12	7.20	.27	.11	732	756.7	307.2	-57.5
58.25	-1.28	7.27	1.11	7.10	.27	.12	734	757.3	306.5	-58.1
58.50	-1.16	7.26	1.11	7.22	.26	.11	739	757.8	305.8	-58.7
58.75	-1.13	7.25	1.10	7.23	.26	.11	739	758.2	305.0	-59.2
59.00	-1.19	7.25	1.10	7.16	.27	.11	734	758.7	304.3	-59.8
59.25	-1.36	7.23	1.10	6.97	.28	.12	719	759.2	303.6	-60.4
59.50	-1.00	7.20	1.09	7.29	.27	.09	726	759.7	302.8	-60.9
59.75	-1.16	7.17	1.08	7.09	.27	.11	728	760.2	302.1	-61.5
60.00	-1.31	7.15	1.08	6.92	.28	.12	722	760.7	301.3	-62.1
60.25	-0.94	7.14	1.07	7.26	.27	.09	728	761.1	300.5	-62.6
60.50	-1.08	7.09	1.07	7.08	.27	.11	725	761.6	299.8	-63.2
60.75	-1.32	7.05	1.06	6.79	.29	.12	722	762.0	299.0	-63.7
61.00	-1.36	7.03	1.05	6.73	.29	.13	722	762.5	298.2	-64.3
61.25	-1.28	6.99	1.04	6.75	.29	.12	720	762.9	297.4	-64.9
61.50	-1.20	6.92	1.04	6.75	.29	.12	720	763.3	296.6	-65.4
61.75	-0.61	6.89	1.03	7.32	.25	.09	738	763.8	295.8	-66.0
62.00	-0.11	6.86	1.02	7.77	.23	.06	746	764.2	295.0	-66.5
62.25	-0.64	6.83	1.02	7.21	.27	.09	726	764.6	294.2	-67.1
62.50	-0.96	6.78	1.01	6.83	.28	.11	719	765.0	293.3	-67.6
62.75	-0.97	6.73	1.00	6.76	.29	.12	719	765.4	292.5	-68.2
63.00	-0.77	6.67	0.99	6.90	.28	.10	720	765.8	291.6	-68.7
63.25	-0.67	6.62	0.98	6.93	.28	.10	717	766.2	290.7	-69.3
63.50	-0.98	6.54	0.97	6.53	.30	.13	706	766.6	289.9	-69.8
63.75	-0.98	6.50	0.96	6.48	.30	.13	709	767.0	289.0	-70.4
64.00	-0.87	6.42	0.95	6.50	.30	.13	711	767.3	288.1	-70.9
64.25	-0.67	6.36	0.94	6.63	.29	.12	714	767.7	287.1	-71.5
64.50	-0.76	6.30	0.93	6.46	.30	.13	706	768.0	286.2	-72.0
64.75	-0.76	6.21	0.92	6.37	.31	.13	704	768.4	285.3	-72.6
65.00	-0.65	6.15	0.91	6.41	.31	.13	706	768.7	284.3	-73.1
65.25	-0.33	6.09	0.90	6.66	.29	.11	715	769.0	283.3	-73.6
65.50	-0.32	6.00	0.89	6.57	.29	.11	711	769.4	282.3	-74.2
65.75	-0.21	5.94	0.88	6.61	.29	.11	714	769.7	281.3	-74.7
66.00	0.01	5.88	0.87	6.75	.28	.10	719	770.0	280.3	-75.3
66.25	0.33	5.80	0.86	6.99	.27	.08	726	770.3	279.2	-75.8
66.50	0.23	5.71	0.85	6.79	.28	.10	719	770.5	278.2	-76.3
66.75	0.14	5.63	0.83	6.61	.29	.11	714	770.8	277.1	-76.8
67.00	0.26	5.56	0.82	6.64	.29	.11	716	771.1	276.0	-77.4
67.25	0.47	5.47	0.81	6.75	.28	.10	720	771.3	274.8	-77.9
67.50	0.79	5.37	0.80	6.96	.27	.08	727	771.6	273.7	-78.4
67.75	1.52	5.31	0.79	7.61	.23	.04	743	771.8	272.5	-78.9
68.00	2.14	5.18	0.78	8.10	.21	.01	750	772.1	271.3	-79.4
38868.20	4.38	5.14	0.77	10.29	-17.10	-16.90	809	772.3	270.3	-79.8
68.30	5.71	5.10	0.77	11.58	.05	.85	832	772.4	269.8	-80.0
68.40	12.81	5.04	0.76	18.62	-16.86	.63	915	772.4	269.3	-80.2
68.50	14.78	5.03	0.76	20.57	.84	.56	926	772.5	268.7	-80.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38868.60	16.10	4.97	0.76	21.84	-16.81	-16.53	935	772.6	268.2	-80.6
68.70	11.01	4.94	0.75	16.70	.92	.66	889	772.7	267.7	-80.8
68.80	6.57	4.92	0.75	12.23	-17.04	.81	831	772.8	267.2	-81.0
68.90	4.04	4.87	0.74	9.65	.14	.92	782	772.9	266.6	-81.2
69.00	1.52	4.83	0.74	7.09	.27	-17.06	705	772.9	266.1	-81.4
38869.25	2.16	4.73	0.73	7.62	-17.23	-17.03	738	773.1	264.7	-81.9
69.50	2.16	4.63	0.72	7.51	.23	.04	738	773.3	263.3	-82.4
69.75	2.05	4.53	0.71	7.29	.24	.05	728	773.5	261.9	-82.9
70.00	2.05	4.42	0.70	7.17	.25	.05	719	773.7	260.4	-83.4
70.25	2.04	4.32	0.69	7.05	.26	.06	716	773.8	258.8	-83.8
70.50	2.03	4.21	0.67	6.91	.27	.07	714	774.0	257.2	-84.3
70.75	1.91	4.10	0.66	6.67	.28	.08	705	774.1	255.6	-84.8
71.00	1.89	4.00	0.65	6.55	.29	.09	704	774.2	253.9	-85.2
71.25	1.87	3.89	0.64	6.40	.29	.11	703	774.4	252.2	-85.7
71.50	1.95	3.79	0.62	6.37	.30	.11	703	774.5	250.4	-86.1
71.75	2.24	3.69	0.61	6.53	.29	.10	709	774.6	248.5	-86.5
72.00	2.21	3.59	0.60	6.40	.29	.11	703	774.7	246.6	-87.0
72.25	2.17	3.50	0.58	6.25	.30	.11	702	774.8	244.7	-87.4
72.50	2.44	3.38	0.57	6.40	.29	.10	702	774.8	242.6	-87.8
72.75	2.91	3.29	0.56	6.76	.27	.08	715	774.9	240.5	-88.2
73.00	3.07	3.17	0.54	6.79	.27	.08	716	775.0	238.3	-88.5
73.25	2.82	3.08	0.52	6.41	.29	.10	702	775.0	236.1	-88.9
73.50	2.76	2.96	0.51	6.23	.30	.11	695	775.1	233.8	-89.2
73.75	2.70	2.88	0.50	6.08	.31	.12	689	775.1	231.4	-89.6
74.00	3.04	2.76	0.48	6.29	.30	.11	696	775.1	228.9	-89.9
74.25	3.08	2.66	0.46	6.19	.30	.11	691	775.2	226.4	-90.2
74.50	3.20	2.54	0.45	6.20	.30	.11	692	775.2	223.8	-90.5
74.75	3.23	2.44	0.43	6.09	.31	.12	686	775.2	221.1	-90.8
75.00	3.24	2.32	0.42	5.98	.32	.13	684	775.2	218.3	-91.0
75.25	3.46	2.22	0.40	6.07	.31	.12	689	775.2	215.5	-91.3
75.50	3.77	2.12	0.39	6.28	.30	.11	696	775.1	212.7	-91.5
75.75	3.95	2.03	0.37	6.35	.29	.10	699	775.1	209.8	-91.7
76.00	4.10	1.91	0.35	6.36	.29	.10	698	775.1	206.8	-91.9
76.25	4.34	1.84	0.34	6.52	.28	.09	703	775.0	203.8	-92.0
76.50	4.19	1.77	0.32	6.27	.29	.11	693	775.0	200.8	-92.1
76.75	4.03	1.66	0.30	5.99	.31	.13	682	774.9	197.7	-92.2
77.00	3.98	1.58	0.29	5.85	.32	.13	674	774.8	194.7	-92.3
77.25	4.04	1.49	0.27	5.80	.33	.14	672	774.8	191.6	-92.4
77.50	4.20	1.42	0.25	5.87	.32	.13	677	774.7	188.6	-92.4
77.75	4.37	1.35	0.23	5.94	.32	.13	679	774.6	185.6	-92.5
78.00	4.43	1.25	0.22	5.90	.32	.13	677	774.5	182.6	-92.5
78.25	4.60	1.16	0.20	5.96	.31	.13	681	774.4	179.7	-92.4
78.50	4.88	1.08	0.19	6.15	.30	.11	689	774.3	176.8	-92.4
78.75	5.06	1.03	0.17	6.26	.29	.11	694	774.1	173.9	-92.3
79.00	5.03	0.95	0.15	6.13	.30	.12	689	774.0	171.1	-92.2
79.25	5.01	0.86	0.14	6.01	.31	.12	685	773.9	168.4	-92.1
79.50	5.20	0.82	0.12	6.14	.30	.11	689	773.7	165.7	-92.0
79.75	5.29	0.74	0.10	6.12	.30	.11	688	773.6	163.1	-91.9
80.00	5.58	0.64	0.09	6.31	.29	.10	694	773.4	160.6	-91.7
80.25	5.47	0.53	0.07	6.06	.30	.12	681	773.2	158.2	-91.6
80.50	5.25	0.53	0.05	5.83	.32	.13	673	773.1	155.8	-91.4
80.75	5.25	0.47	0.03	5.75	.32	.14	672	772.9	153.5	-91.2
81.00	5.35	0.41	0.02	5.78	.32	.14	674	772.7	151.3	-91.0
81.25	5.55	0.32	0.00	5.86	.32	.13	677	772.5	149.1	-90.7
81.50	5.76	0.26	-0.01	6.01	.30	.12	684	772.3	147.0	-90.5
81.75	5.86	0.20	-0.03	6.03	.30	.12	685	772.1	145.0	-90.2
82.00	5.87	0.12	-0.05	5.93	.31	.13	681	771.9	143.1	-90.0
82.25	5.87	0.05	-0.05	5.88	.31	.13	680	771.7	141.2	-89.7
82.50	6.09	-0.01	-0.08	6.00	.30	.12	686	771.4	139.3	-89.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_g$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_g$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38882.75	6.51	-0.09	-0.10	6.32	-17.28	-17.10	698	771.2	137.6	-89.2
83.00	6.63	-0.18	-0.11	6.34	.28	.10	699	770.9	135.8	-88.9
83.25	6.85	-0.23	-0.13	6.49	.27	.09	704	770.7	134.2	-88.6
83.50	6.76	-0.32	-0.14	6.31	.28	.10	697	770.4	132.5	-88.3
83.75	6.68	-0.37	-0.16	6.15	.29	.11	691	770.2	131.0	-88.0
84.00	6.59	-0.43	-0.17	5.99	.30	.12	685	769.9	129.4	-87.6
84.25	6.41	-0.53	-0.19	5.69	.32	.15	673	769.6	128.0	-87.3
84.50	6.54	-0.62	-0.21	5.71	.32	.14	673	769.4	126.5	-87.0
84.75	6.56	-0.68	-0.23	5.65	.32	.15	670	769.1	125.1	-86.7
85.00	6.79	-0.75	-0.24	5.80	.31	.14	675	768.8	123.7	-86.3
85.25	8.05	-0.84	-0.25	6.96	.24	.05	711	768.5	122.4	-86.0
85.50	10.13	-0.92	-0.27	8.94	.14	-16.94	767	768.2	121.1	-85.6
85.75	9.03	-1.00	-0.29	7.74	.19	-17.00	734	767.9	119.8	-85.3
86.00	7.52	-1.06	-0.30	6.16	.29	.11	678	767.6	118.6	-84.9
86.25	7.35	-1.15	-0.32	5.88	.31	.13	671	767.2	117.4	-84.6
86.50	7.38	-1.24	-0.33	5.81	.31	.14	673	766.9	116.2	-84.2
86.75	7.42	-1.28	-0.35	5.78	.31	.14	673	766.6	115.0	-83.8
87.00	7.96	-1.36	-0.36	6.25	.28	.11	693	766.3	113.9	-83.5
87.25	8.51	-1.45	-0.37	6.69	.25	.08	707	765.9	112.8	-83.1
87.50	9.68	-1.52	-0.39	7.76	.18	.01	746	765.6	111.7	-82.7
87.75	9.30	-1.59	-0.40	7.32	.21	.04	735	765.2	110.6	-82.3
88.00	8.62	-1.67	-0.41	6.54	.26	.09	709	764.9	109.5	-82.0
88.25	8.45	-1.76	-0.43	6.27	.27	.11	699	764.5	108.5	-81.6
88.50	8.70	-1.81	-0.44	6.45	.26	.09	705	764.1	107.5	-81.2
88.75	9.15	-1.90	-0.45	6.80	.24	.07	716	763.8	106.5	-80.8
89.00	9.91	-2.00	-0.47	7.44	.20	.03	732	763.4	105.5	-80.4
89.25	10.56	-2.09	-0.48	7.99	.18	-16.99	743	763.0	104.5	-80.0
89.50	9.88	-2.19	-0.50	7.20	.22	-17.04	723	762.6	103.6	-79.7
89.75	9.72	-2.26	-0.51	6.95	.23	.06	723	762.2	102.6	-79.3
90.00	10.17	-2.33	-0.53	7.30	.21	.04	735	761.8	101.7	-78.9
90.25	10.62	-2.44	-0.54	7.64	.19	.02	742	761.4	100.8	-78.5
90.50	10.45	-2.55	-0.55	7.35	.21	.04	732	761.0	99.9	-78.1
90.75	10.29	-2.66	-0.57	7.06	.22	.06	728	760.6	99.0	-77.7
91.00	10.22	-2.74	-0.58	6.90	.23	.07	725	760.2	98.1	-77.3
91.25	10.26	-2.85	-0.60	6.82	.23	.08	723	759.8	97.3	-76.9
91.50	10.30	-2.95	-0.61	6.74	.24	.08	723	759.4	96.4	-76.5
91.75	10.24	-3.05	-0.62	6.57	.25	.09	717	759.0	95.6	-76.1
92.00	10.38	-3.15	-0.64	6.59	.25	.09	717	758.5	94.7	-75.7
92.25	10.52	-3.25	-0.65	6.62	.25	.09	715	758.1	93.9	-75.3
92.50	10.76	-3.35	-0.66	6.75	.24	.08	719	757.7	93.1	-74.8
92.75	10.70	-3.45	-0.68	6.57	.25	.10	716	757.2	92.2	-74.4
93.00	10.73	-3.54	-0.69	6.50	.25	.10	716	756.8	91.4	-74.0
93.25	10.98	-3.64	-0.71	6.63	.24	.09	722	756.3	90.6	-73.6
93.50	11.01	-3.73	-0.72	6.56	.25	.10	720	755.9	89.9	-73.2
93.75	11.15	-3.82	-0.74	6.59	.24	.10	720	755.5	89.1	-72.8
94.00	11.39	-3.91	-0.75	6.73	.24	.09	725	755.0	88.3	-72.4
94.25	11.52	-4.01	-0.76	6.75	.23	.09	726	754.5	87.5	-72.0
94.50	11.55	-4.11	-0.77	6.67	.24	.09	725	754.1	86.8	-71.5
94.75	11.68	-4.20	-0.79	6.69	.24	.09	726	753.6	86.0	-71.1
95.00	11.92	-4.31	-0.80	6.81	.23	.08	730	753.2	85.2	-70.7
95.25	12.05	-4.41	-0.82	6.81	.23	.08	730	752.7	84.5	-70.3
95.50	12.28	-4.51	-0.83	6.94	.22	.08	735	752.2	83.8	-69.9
95.75	12.61	-4.59	-0.84	7.18	.21	.06	743	751.8	83.0	-69.5
96.00	12.74	-4.68	-0.86	7.20	.21	.06	742	751.3	82.3	-69.0
96.25	12.97	-4.78	-0.87	7.31	.21	.05	741	750.8	81.6	-68.6
96.50	15.04	-4.85	-0.88	9.31	.11	-16.95	793	750.3	80.8	-68.2
96.75	16.70	-4.96	-0.90	10.84	.05	.88	823	749.8	80.1	-67.8
97.00	14.66	-5.04	-0.91	8.71	.14	.98	778	749.4	79.4	-67.3
97.25	14.27	-5.14	-0.92	8.21	.16	-17.00	770	748.9	78.7	-66.9
97.50	14.08	-5.24	-0.93	7.90	.18	.02	761	748.4	78.0	-66.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38897.75	14.19	-5.31	-0.95	7.94	-17.17	-17.02	765	747.9	77.3	-66.1
98.00	14.10	-5.37	-0.96	7.77	.18	.03	762	747.4	76.6	-65.6
98.25	14.01	-5.47	-0.97	7.57	.19	.04	757	746.9	75.9	-65.2
98.50	14.11	-5.56	-0.99	7.56	.19	.04	757	746.4	75.2	-64.8
98.75	14.12	-5.63	-1.00	7.48	.19	.05	756	746.0	74.5	-64.4
99.00	14.22	-5.71	-1.01	7.51	.19	.05	756	745.5	73.8	-63.9
99.25	14.43	-5.78	-1.02	7.63	.19	.04	760	745.0	73.1	-63.5
99.50	14.32	-5.88	-1.03	7.42	.20	.06	755	744.5	72.5	-63.1
99.75	14.42	-5.92	-1.04	7.46	.20	.05	758	744.0	71.8	-62.7
38900.00	14.62	-5.99	-1.06	7.57	.19	.05	763	743.5	71.1	-62.2
00.25	14.81	-6.05	-1.07	7.69	.18	.04	767	743.0	70.4	-61.8
00.50	14.90	-6.11	-1.08	7.72	.18	.04	768	742.5	69.8	-61.4
00.75	15.19	-6.19	-1.09	7.91	.17	.03	772	742.0	69.1	-60.9
01.00	15.69	-6.23	-1.10	8.36	.15	.01	782	741.5	68.4	-60.5
01.25	16.39	-6.31	-1.11	8.97	.12	-16.98	797	741.0	67.8	-60.1
01.50	16.36	-6.34	-1.12	8.91	.12	.98	797	740.5	67.1	-59.6
01.75	16.75	-6.41	-1.13	9.21	.11	.97	805	740.0	66.5	-59.2
02.00	17.13	-6.44	-1.14	9.55	.10	.95	811	739.6	65.8	-58.8
02.25	17.71	-6.52	-1.15	10.05	.08	.93	821	739.1	65.1	-58.3
02.50	17.78	-6.54	-1.16	10.08	.07	.93	823	738.6	64.5	-57.9
02.75	17.43	-6.58	-1.17	9.68	.09	.95	816	738.1	63.8	-57.5
03.00	17.19	-6.60	-1.18	9.41	.10	.96	810	737.6	63.2	-57.0
03.25	17.24	-6.63	-1.18	9.43	.10	.96	811	737.1	62.6	-56.6
03.50	17.20	-6.64	-1.19	9.36	.11	.97	810	736.6	61.9	-56.2
03.75	17.04	-6.69	-1.20	9.15	.11	.98	807	736.2	61.3	-55.7
04.00	16.88	-6.72	-1.21	8.96	.12	.99	804	735.7	60.6	-55.3
04.25	16.62	-6.74	-1.22	8.66	.14	-17.01	797	735.2	60.0	-54.9
04.50	16.76	-6.76	-1.22	8.79	.13	.00	800	734.7	59.4	-54.4
04.75	16.70	-6.80	-1.23	8.67	.14	.01	798	734.2	58.7	-54.0
05.00	16.53	-6.82	-1.23	8.47	.15	.02	794	733.8	58.1	-53.5
05.25	13.56	-6.83	-1.24	8.48	.14	.02	796	733.3	57.5	-53.1
05.50	16.27	-6.84	-1.25	8.18	.16	.04	791	732.8	56.8	-52.7
05.75	16.19	-6.85	-1.25	8.09	.16	.05	789	732.4	56.2	-52.2
06.00	16.31	-6.86	-1.26	8.19	.16	.04	792	731.9	55.6	-51.8
06.25	16.22	-6.91	-1.26	8.06	.16	.05	789	731.5	54.9	-51.3
06.50	16.23	-6.92	-1.26	8.06	.16	.05	790	731.0	54.3	-50.9
06.75	16.24	-6.93	-1.27	8.04	.16	.06	791	730.5	53.7	-50.5
07.00	16.34	-6.94	-1.27	8.14	.16	.05	792	730.1	53.1	-50.0
07.25	16.34	-6.94	-1.27	8.13	.17	.05	791	729.6	52.4	-49.6
07.50	16.44	-6.94	-1.27	8.23	.16	.05	795	729.2	51.8	-49.1
07.75	16.43	-6.94	-1.28	8.21	.16	.05	795	728.8	51.2	-48.7
08.00	16.20	-6.94	-1.28	7.99	.17	.07	790	728.3	50.6	-48.2
08.25	16.08	-6.93	-1.28	7.88	.18	.07	789	727.9	50.0	-47.8
08.50	16.06	-6.92	-1.28	7.86	.18	.08	790	727.5	49.3	-47.4
08.75	16.03	-6.91	-1.28	7.84	.18	.08	788	727.1	48.7	-46.9
09.00	15.89	-6.89	-1.28	7.72	.19	.09	786	726.6	48.1	-46.5
09.25	15.54	-6.86	-1.28	7.40	.20	.11	780	726.2	47.5	-46.0
09.50	15.29	-6.85	-1.28	7.16	.22	.12	775	725.8	46.9	-45.6
09.75	15.14	-6.84	-1.28	7.02	.22	.13	772	725.4	46.3	-45.1
10.00	14.99	-6.82	-1.28	6.89	.23	.14	768	725.0	45.6	-44.7
10.25	14.93	-6.80	-1.28	6.85	.24	.15	768	724.6	45.0	-44.2
10.50	14.97	-6.74	-1.28	6.95	.23	.14	772	724.2	44.4	-43.8
10.75	15.21	-6.73	-1.28	7.20	.21	.13	779	723.8	43.8	-43.4
11.00	15.13	-6.72	-1.28	7.14	.22	.13	778	723.5	43.2	-42.9
11.25	14.95	-6.67	-1.28	7.00	.23	.14	775	723.1	42.6	-42.5
11.50	14.66	-6.63	-1.28	6.75	.24	.16	768	722.7	42.0	-42.0
11.75	14.57	-6.61	-1.28	6.68	.25	.16	766	722.4	41.4	-41.6
12.00	14.48	-6.57	-1.28	6.63	.25	.17	765	722.0	40.8	-41.1
12.25	14.17	-6.53	-1.28	6.36	.27	.19	759	721.7	40.2	-40.7
12.50	13.96	-6.51	-1.27	6.18	.28	.20	753	721.3	39.6	-40.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38912.75	13.85	-6.44	-1.27	6.14	-17.29	-17.21	751	721.0	38.9	-39.6
13.00	13.93	-6.41	-1.27	6.25	.28	.20	755	720.6	38.3	-39.3
13.25	13.91	-6.36	-1.27	6.29	.28	.20	757	720.3	37.7	-38.9
13.50	13.78	-6.32	-1.26	6.21	.29	.21	756	720.0	37.1	-38.4
13.75	13.75	-6.25	-1.26	6.24	.28	.21	758	719.7	36.5	-38.0
14.00	13.51	-6.20	-1.26	6.05	.30	.22	751	719.4	35.9	-37.5
14.25	13.24	-6.17	-1.26	5.81	.32	.24	745	719.1	35.3	-37.1
14.50	13.14	-6.10	-1.25	5.79	.32	.24	747	718.8	34.7	-36.6
14.75	13.56	-6.04	-1.25	6.26	.28	.21	763	718.5	34.1	-36.2
15.00	13.77	-5.99	-1.25	6.53	.27	.19	772	718.2	33.5	-35.7
15.25	13.78	-5.94	-1.24	6.61	.26	.18	775	717.9	32.9	-35.3
15.50	14.42	-5.89	-1.24	7.29	.22	.14	793	717.7	32.3	-34.8
15.75	16.07	-5.81	-1.24	9.02	.13	.05	830	717.4	31.7	-34.4
16.00	16.40	-5.77	-1.23	9.40	.11	.03	838	717.2	31.1	-33.9
16.25	15.81	-5.69	-1.23	8.89	.13	.05	830	716.9	30.5	-33.4
16.50	15.22	-5.64	-1.22	8.36	.16	.08	820	716.7	29.9	-33.0
16.75	14.73	-5.57	-1.22	7.94	.18	.11	811	716.5	29.3	-32.5
17.00	14.66	-5.49	-1.21	7.96	.18	.11	812	716.2	28.7	-32.1
17.25	14.58	-5.44	-1.20	7.94	.18	.12	813	716.0	28.1	-31.6
17.50	14.41	-5.37	-1.20	7.84	.19	.12	811	715.8	27.5	-31.2
17.75	14.54	-5.31	-1.19	8.04	.18	.11	816	715.6	26.9	-30.7
18.00	14.47	-5.25	-1.18	8.03	.18	.11	816	715.4	26.3	-30.3
18.25	14.40	-5.17	-1.18	8.05	.18	.11	817	715.2	25.7	-29.8
18.50	14.02	-5.10	-1.17	7.75	.20	.13	811	715.1	25.1	-29.4
18.75	13.74	-5.03	-1.16	7.55	.21	.15	808	714.9	24.5	-28.9
19.00	13.67	-4.96	-1.16	7.55	.21	.15	808	714.7	23.9	-28.4
19.25	13.40	-4.89	-1.15	7.36	.22	.16	805	714.6	23.3	-28.0
19.50	13.33	-4.82	-1.14	7.36	.22	.16	805	714.4	22.7	-27.5
19.75	13.77	-4.74	-1.13	7.90	.19	.13	818	714.3	22.1	-27.1
20.00	14.51	-4.73	-1.12	8.66	.15	.08	834	714.1	21.5	-26.6
20.25	16.28	-4.66	-1.11	10.52	.06	-16.99	865	714.0	20.9	-26.1
20.50	17.44	-4.59	-1.10	11.74	.02	.95	880	713.9	20.3	-25.7
20.75	18.18	-4.51	-1.09	12.58	-16.99	.92	889	713.8	19.7	-25.2
21.00	16.97	-4.41	-1.08	11.48	-17.03	.96	876	713.7	19.1	-24.8
21.25	14.63	-4.34	-1.07	9.22	.13	-17.07	844	713.6	18.5	-24.3
21.50	13.94	-4.25	-1.06	8.63	.16	.10	834	713.6	17.9	-23.8
21.75	13.95	-4.18	-1.05	8.72	.16	.10	836	713.5	17.3	-23.4
22.00	13.76	-4.10	-1.04	8.62	.16	.11	835	713.4	16.7	-22.9
22.25	13.36	-4.03	-1.03	8.31	.18	.12	830	713.4	16.1	-22.5
22.50	12.65	-3.94	-1.02	7.69	.21	.16	818	713.3	15.5	-22.0
22.75	12.86	-3.87	-1.00	7.99	.20	.14	825	713.3	14.9	-21.5
23.00	13.37	-3.78	-0.99	8.60	.17	.10	837	713.3	14.3	-21.1
23.25	13.47	-3.69	-0.98	8.81	.16	.10	840	713.2	13.7	-20.6
23.50	13.37	-3.59	-0.97	8.80	.16	.10	840	713.2	13.1	-20.2
23.75	13.15	-3.52	-0.96	8.67	.17	.11	838	713.2	12.5	-19.7
24.00	12.52	-3.44	-0.95	8.13	.20	.14	829	713.2	11.9	-19.2
24.25	12.19	-3.34	-0.94	7.91	.21	.15	825	713.2	11.3	-18.8
24.50	11.66	-3.26	-0.92	7.48	.24	.18	817	713.2	10.7	-18.3
24.75	11.32	-3.15	-0.91	7.26	.25	.19	813	713.3	10.1	-17.8
25.00	10.88	-3.05	-0.90	6.93	.27	.22	807	713.3	9.5	-17.4
25.25	10.94	-2.97	-0.89	7.08	.26	.21	810	713.4	8.9	-16.9
25.50	11.41	-2.89	-0.88	7.64	.23	.17	822	713.4	8.3	-16.4
25.75	12.49	-2.81	-0.86	8.82	.17	.11	844	713.5	7.7	-16.0
26.00	13.04	-2.72	-0.85	9.47	.14	.07	855	713.5	7.1	-15.5
26.25	10.63	-2.62	-0.84	7.17	.26	.20	816	713.6	6.5	-15.0
26.50	9.43	-2.52	-0.82	6.09	.33	.27	791	713.7	5.9	-14.6
38926.60	11.76	-2.42	-0.82	8.52	-17.19	-17.12	841	713.8	5.7	-14.4
26.80	12.82	-2.42	-0.81	9.59	.13	.06	860	713.8	5.2	-14.0
27.00	17.08	-2.32	-0.80	13.95	-16.96	-16.89	913	713.9	4.7	-13.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38927.20	24.27	-2.26	-0.79	21.32	-16.78	-16.70	972	714.0	4.3	-13.3
27.40	24.14	-2.20	-0.78	21.16	.78	.70	972	714.1	3.8	-12.9
38927.50	22.98	-2.24	-0.78	19.96	-16.80	-16.73	964	714.1	3.5	-12.7
27.60	26.14	-2.10	-0.77	23.27	.74	.66	986	714.2	3.3	-12.5
27.70	26.10	-2.08	-0.77	23.25	.73	.66	987	714.2	3.0	-12.3
27.80	33.10	-2.03	-0.76	30.31	.61	.53	1029	714.3	2.8	-12.1
27.90	36.26	-2.00	-0.76	33.50	.56	.48	1046	714.4	2.6	-12.0
28.00	33.65	-1.98	-0.75	30.93	.60	.52	1034	714.4	2.3	-11.8
28.10	29.12	-1.90	-0.75	26.47	.67	.59	1010	714.5	2.1	-11.6
28.20	25.87	-1.88	-0.74	23.25	.73	.65	990	714.5	1.8	-11.4
28.30	22.62	-1.86	-0.74	20.02	.80	.72	967	714.6	1.6	-11.2
38928.40	22.25	-1.80	-0.73	19.72	-16.81	-16.73	964	714.6	1.4	-11.0
28.60	17.18	-1.76	-0.72	14.71	.95	.87	922	714.8	0.9	-10.6
28.80	16.75	-1.67	-0.71	14.37	.97	.89	917	714.9	0.4	-10.3
29.00	14.24	-1.58	-0.70	11.96	-17.05	.97	892	715.0	359.9	-9.9
29.20	17.80	-1.50	-0.69	15.61	-16.93	.85	929	715.2	359.4	-9.5
29.40	9.19	-1.45	-0.68	7.06	-17.28	-17.20	823	715.3	358.9	-9.1
29.60	9.21	-1.37	-0.67	7.18	.28	.21	821	715.5	358.5	-8.8
29.80	11.16	-1.29	-0.66	9.21	.18	.11	856	715.6	358.0	-8.4
38930.00	10.57	-1.23	-0.65	8.69	-17.20	-17.13	848	715.8	357.5	-8.0
30.25	9.36	-1.11	-0.64	7.60	.26	.18	831	716.0	356.9	-7.5
30.50	8.95	-1.04	-0.63	7.28	.28	.21	824	716.2	356.3	-7.1
30.75	8.54	-0.94	-0.61	7.00	.30	.23	819	716.4	355.7	-6.6
31.00	8.22	-0.84	-0.60	6.78	.32	.25	816	716.7	355.1	-6.1
31.25	6.97	-0.75	-0.59	5.64	.40	.33	788	716.9	354.4	-5.6
31.50	6.22	-0.64	-0.58	5.00	.45	.38	768	717.1	353.8	-5.2
31.75	6.69	-0.56	-0.56	5.58	.41	.33	787	717.4	353.2	-4.7
32.00	6.74	-0.47	-0.55	5.72	.40	.32	791	717.6	352.6	-4.2
32.25	6.68	-0.39	-0.53	5.76	.40	.32	793	717.9	352.0	-3.7
32.50	6.71	-0.32	-0.52	5.87	.39	.32	797	718.2	351.4	-3.3
32.75	6.52	-0.22	-0.51	5.79	.40	.32	795	718.5	350.8	-2.8
33.00	6.11	-0.13	-0.49	5.50	.42	.34	788	718.7	350.2	-2.3
33.25	6.11	-0.05	-0.48	5.57	.42	.34	790	719.0	349.6	-1.8
33.50	6.50	-0.02	-0.47	6.00	.39	.30	801	719.3	348.9	-1.4
33.75	6.77	0.11	-0.45	6.43	.36	.27	812	719.6	348.3	-0.9
34.00	6.79	0.20	-0.44	6.55	.36	.27	815	719.9	347.7	-0.4
34.25	6.72	0.27	-0.43	6.56	.36	.27	816	720.3	347.1	0.1
34.50	6.75	0.34	-0.41	6.67	.35	.26	819	720.6	346.5	0.5
34.75	6.67	0.42	-0.40	6.69	.35	.26	820	720.9	345.9	1.0
35.00	6.49	0.51	-0.38	6.62	.36	.26	819	721.2	345.2	1.5
35.25	6.20	0.58	-0.37	6.41	.37	.28	816	721.6	344.6	2.0
35.50	6.11	0.64	-0.36	6.40	.38	.28	816	721.9	344.0	2.5
35.75	6.03	0.74	-0.34	6.42	.38	.28	817	722.3	343.4	2.9
36.00	5.73	0.83	-0.33	6.23	.39	.29	812	722.6	342.8	3.4
36.25	5.33	0.90	-0.32	5.91	.42	.31	805	723.0	342.1	3.9
36.50	5.34	0.97	-0.30	6.01	.41	.31	808	723.4	341.5	4.4
36.75	6.78	1.06	-0.29	7.55	.31	.20	840	723.8	340.9	4.9
37.00	8.53	1.16	-0.28	9.40	.22	.09	871	724.1	340.3	5.3
37.25	6.89	1.24	-0.26	7.87	.30	.17	848	724.5	339.6	5.8
37.50	8.43	1.31	-0.25	9.49	.22	.10	872	724.9	339.0	6.3
37.75	7.10	1.40	-0.23	8.26	.28	.16	854	725.3	338.4	6.8
38.00	6.68	1.47	-0.22	7.94	.30	.18	849	725.7	337.7	7.3
38.25	5.86	1.58	-0.21	7.23	.34	.21	838	726.1	337.1	7.8
38.50	5.04	1.66	-0.19	6.51	.39	.26	823	726.5	336.5	8.2
38.75	4.73	1.73	-0.18	6.28	.41	.28	818	726.9	335.8	8.7
39.00	4.41	1.81	-0.16	6.06	.42	.30	815	727.3	335.2	9.2
39.25	4.20	1.89	-0.15	5.95	.43	.31	814	727.7	334.6	9.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_g$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_g$	T_π (°K)	z (km)	$\alpha_\pi = \alpha_\odot$ (deg)	$\delta_\pi = \delta_\odot$ (deg)
38939.50	4.10	2.00	-0.14	5.95	-17.43	-17.31	814	728.2	333.9	10.2
39.75	3.68	2.08	-0.13	5.63	.46	.34	806	728.6	333.3	10.7
40.00	3.16	2.15	-0.11	5.20	.50	.37	795	729.0	332.6	11.1
38940.20	3.23	2.22	-0.10	5.34	-17.49	-17.36	799	729.4	332.1	11.5
40.40	2.82	2.30	-0.09	5.03	.52	.38	788	729.7	331.6	11.9
40.60	4.01	2.34	-0.08	6.27	.42	.28	821	730.1	331.1	12.3
40.80	5.04	2.41	-0.07	7.38	.35	.21	844	730.4	330.6	12.7
41.00	4.04	2.46	-0.06	7.04	.37	.23	838	730.8	330.1	13.1
41.20	4.87	2.53	-0.05	7.35	.36	.21	845	731.1	329.5	13.5
41.40	4.94	2.60	-0.04	7.50	.35	.20	848	731.5	329.0	13.9
41.60	5.18	2.66	-0.03	7.81	.33	.18	854	731.8	328.5	14.2
41.80	4.93	2.71	-0.02	7.62	.35	.19	851	732.2	328.0	14.6
42.00	4.69	2.76	-0.01	7.44	.36	.20	848	732.6	327.4	15.0
42.20	5.24	2.83	-0.01	8.06	.32	.16	859	732.9	326.9	15.4
42.40	4.52	2.87	0.00	7.39	.36	.20	848	733.3	326.4	15.8
42.60	4.27	2.92	0.01	7.21	.37	.22	845	733.6	325.9	16.2
42.80	3.87	2.97	0.02	6.87	.40	.24	839	734.0	325.3	16.6
43.00	3.79	3.03	0.03	6.85	.40	.24	839	734.4	324.8	17.0
38943.25	3.11	3.08	0.04	6.23	-17.44	-17.28	826	734.8	324.1	17.5
43.50	2.80	3.14	0.05	5.99	.46	.30	823	735.3	323.5	17.9
43.75	2.60	3.21	0.06	5.87	.47	.31	822	735.8	322.8	18.4
44.00	2.30	3.27	0.07	5.64	.48	.33	818	736.2	322.1	18.9
44.25	2.00	3.32	0.08	5.40	.50	.35	811	736.7	321.4	19.4
44.50	1.81	3.35	0.09	5.25	.52	.36	808	737.2	320.8	19.9
44.75	1.82	3.39	0.10	5.31	.51	.36	814	737.6	320.1	20.4
45.00	1.53	3.43	0.11	5.06	.53	.38	805	738.1	319.4	20.9
45.25	1.24	3.46	0.12	4.82	.56	.40	796	738.6	318.7	21.4
45.50	0.85	3.49	0.13	4.47	.59	.43	789	739.0	318.0	21.9
45.75	0.56	3.53	0.14	4.23	.61	.46	782	739.5	317.3	22.3
46.00	0.59	3.56	0.15	4.30	.60	.45	784	740.0	316.6	22.8
46.25	0.51	3.58	0.16	4.26	.61	.45	782	740.4	315.9	23.3
46.50	0.55	3.60	0.16	4.31	.61	.45	786	740.9	315.2	23.8
46.75	0.68	3.64	0.17	4.49	.59	.43	796	741.4	314.5	24.3
47.00	0.92	3.67	0.18	4.77	.56	.40	808	741.9	313.8	24.8
38947.20	1.10	3.68	0.19	4.97	-17.55	-17.38	810	742.2	313.3	25.2
47.40	2.65	3.68	0.20	6.53	.44	.25	842	742.6	312.7	25.6
47.60	4.85	3.69	0.20	8.74	.32	.11	881	743.0	312.1	26.0
47.80	4.97	3.70	0.21	8.83	.31	.11	883	743.3	311.5	26.4
48.00	3.65	3.70	0.22	7.57	.38	.18	865	743.7	311.0	26.7
48.20	2.65	3.71	0.22	6.58	.44	.25	849	744.1	310.4	27.1
48.40	2.45	3.71	0.23	6.39	.45	.26	845	744.5	309.8	27.5
48.60	2.26	3.71	0.24	6.21	.46	.28	843	744.8	309.2	27.9
48.80	2.39	3.70	0.24	6.33	.45	.27	848	745.2	308.6	28.3
49.00	2.21	3.70	0.25	6.16	.47	.28	842	745.6	308.0	28.7
49.20	2.34	3.69	0.26	6.29	.46	.25	841	745.9	307.4	29.1
49.40	2.64	3.68	0.26	6.58	.45	.23	847	746.3	306.8	29.5
49.60	1.82	3.67	0.27	5.76	.50	.29	830	746.6	306.2	29.9
49.80	2.13	3.65	0.27	6.05	.48	.27	838	747.0	305.6	30.3
50.00	3.08	3.60	0.28	6.96	.43	.19	857	747.4	305.0	30.7
50.20	1.95	3.58	0.28	5.81	.50	.27	833	747.7	304.4	31.1
50.40	1.78	3.56	0.29	5.64	.52	.29	828	748.1	303.8	31.4
50.60	1.62	3.49	0.30	5.41	.53	.32	825	748.4	303.2	31.8
50.80	1.62	3.44	0.30	5.36	.53	.32	825	748.8	302.5	32.2
51.00	1.95	3.37	0.31	5.63	.51	.30	831	749.1	301.9	32.6
51.20	1.96	3.30	0.31	5.57	.52	.30	829	749.5	301.3	33.0
51.40	3.41	3.23	0.32	6.95	.43	.19	860	749.8	300.6	33.4
51.60	2.46	3.15	0.32	5.94	.50	.26	839	750.1	300.0	33.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38951.80	1.52	3.06	0.33	4.91	-17.58	-17.35	812	750.5	299.3	34.2
52.00	0.90	2.98	0.33	4.22	.63	.43	793	750.8	298.7	34.6
38952.25	0.25	2.86	0.34	3.45	-17.71	-17.52	763	751.2	297.9	35.1
52.50	0.29	2.75	0.34	3.38	.72	.53	763	751.7	297.0	35.5
52.75	0.13	2.61	0.35	3.08	.76	.57	746	752.1	296.2	36.0
53.00	0.18	2.48	0.35	3.01	.77	.58	741	752.5	295.4	36.5
53.25	0.44	2.34	0.36	3.15	.75	.56	752	752.9	294.5	37.0
53.50	0.82	2.20	0.36	3.37	.72	.53	769	753.3	293.6	37.5
53.75	1.20	2.06	0.36	3.62	.69	.49	779	753.7	292.8	38.0
54.00	1.48	1.91	0.37	3.76	.69	.47	777	754.0	291.9	38.5
54.25	1.16	1.74	0.37	3.27	.75	.53	749	754.4	291.0	38.9
54.50	1.93	1.60	0.38	3.91	.67	.45	789	754.8	290.1	39.4
54.75	3.26	1.43	0.38	5.07	.56	.34	831	755.2	289.2	39.9
55.00	3.56	1.25	0.38	5.19	.54	.33	836	755.5	288.2	40.4
55.25	3.76	1.06	0.39	5.21	.54	.33	840	755.9	287.3	40.9
55.50	4.06	0.87	0.39	5.32	.53	.32	848	756.2	286.3	41.3
55.75	4.16	0.70	0.40	5.26	.53	.33	851	756.6	285.4	41.8
56.00	4.26	0.50	0.40	5.16	.54	.33	845	756.9	284.4	42.3
56.25	4.56	0.32	0.40	5.28	.53	.32	844	757.2	283.4	42.8
56.50	4.66	0.13	0.40	5.19	.55	.32	837	757.6	282.4	43.2
56.75	4.35	0.00	0.41	4.76	.59	.36	822	757.9	281.3	43.7
57.00	4.14	0.00	0.41	4.55	.61	.38	817	758.2	280.3	44.2
57.25	3.73	0.00	0.41	4.14	.64	.42	805	758.5	279.2	44.6
57.50	3.42	0.00	0.41	3.83	.67	.46	798	758.8	278.1	45.1
57.75	3.22	0.00	0.41	3.63	.69	.48	795	759.1	277.0	45.6
58.00	3.11	0.00	0.41	3.52	.70	.50	791	759.4	275.9	46.0
58.25	3.01	0.00	0.42	3.43	.71	.51	789	759.7	274.7	46.5
58.50	2.70	0.00	0.42	3.12	.75	.55	773	759.9	273.5	47.0
58.75	2.70	0.00	0.42	3.12	.75	.55	772	760.2	272.3	47.4
59.00	2.70	0.00	0.42	3.12	.75	.55	771	760.4	271.1	47.9
59.25	2.50	0.00	0.42	2.92	.77	.58	761	760.7	269.9	48.3
59.50	1.99	0.00	0.41	2.40	.86	.67	716	760.9	268.6	48.8
59.75	2.81	0.00	0.41	3.22	.74	.53	774	761.2	267.3	49.2
60.00	3.22	0.00	0.41	3.63	.70	.47	785	761.4	265.9	49.7
60.25	5.27	0.00	0.41	5.68	.51	.27	859	761.6	264.5	50.1
60.50	5.38	0.00	0.40	5.78	.50	.26	858	761.8	263.1	50.5
60.75	4.87	0.00	0.40	5.27	.55	.29	842	762.0	261.6	51.0
61.00	4.46	0.00	0.40	4.86	.58	.33	834	762.2	260.1	51.4
61.25	3.65	0.00	0.40	4.05	.65	.42	812	762.4	258.6	51.8
61.50	3.75	0.00	0.39	4.14	.63	.42	824	762.5	257.0	52.2
61.75	3.76	0.00	0.39	4.15	.63	.41	821	762.7	255.4	52.6
62.00	3.35	0.00	0.39	3.74	.68	.45	798	762.8	253.7	53.0
62.25	3.15	0.00	0.38	3.53	.71	.47	784	763.0	252.0	53.4
62.50	3.06	0.00	0.38	3.44	.71	.49	787	763.1	250.2	53.8
62.75	2.96	0.00	0.37	3.33	.72	.51	791	763.2	248.4	54.2
63.00	2.56	0.00	0.37	2.93	.77	.57	766	763.4	246.5	54.6
63.25	2.87	0.00	0.36	3.23	.73	.52	785	763.5	244.5	54.9
63.50	2.98	0.00	0.35	3.33	.72	.51	788	763.6	242.5	55.3
63.75	3.30	0.00	0.34	3.64	.68	.47	805	763.7	240.5	55.6
64.00	3.30	0.00	0.34	3.64	.68	.46	800	763.7	238.3	56.0
64.25	3.62	0.00	0.33	3.95	.66	.42	805	763.8	236.1	56.3
64.50	3.73	0.00	0.33	4.06	.65	.41	809	763.9	233.8	56.6
64.75	3.84	0.00	0.32	4.16	.64	.39	811	763.9	231.5	56.9
65.00	3.75	0.00	0.31	4.06	.66	.40	803	764.0	229.1	57.2
65.25	3.66	0.00	0.31	3.97	.66	.41	803	764.0	226.6	57.5
65.50	3.67	0.00	0.30	3.97	.66	.42	806	764.0	224.1	57.7
65.75	3.57	0.00	0.29	3.86	.67	.43	801	764.0	221.4	58.0
66.00	3.18	0.00	0.29	3.47	.71	.48	786	764.0	218.8	58.2
66.25	2.88	0.00	0.28	3.16	.75	.52	766	764.0	216.0	58.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38966.50	2.89	0.00	0.27	3.16	-17.75	-17.52	764	764.0	213.2	58.6
66.75	2.80	0.00	0.26	3.06	.76	.54	764	764.0	210.4	58.8
67.00	2.81	0.00	0.26	3.07	.75	.54	772	764.0	207.5	58.9
67.25	2.62	0.00	0.25	2.87	.78	.57	759	763.9	204.6	59.0
67.50	2.53	0.00	0.24	2.77	.79	.58	748	763.9	201.7	59.2
67.75	2.54	0.00	0.24	2.78	.79	.58	748	763.8	198.7	59.2
68.00	2.56	0.00	0.23	2.79	.79	.58	751	763.7	195.7	59.3
68.25	2.67	0.00	0.23	2.90	.78	.56	755	763.6	192.7	59.4
68.50	3.00	0.00	0.22	3.22	.74	.51	771	763.6	189.7	59.4
68.75	3.32	0.00	0.21	3.53	.70	.47	786	763.5	186.8	59.4
69.00	3.54	0.00	0.21	3.75	.68	.44	794	763.4	183.8	59.4
69.25	3.76	0.00	0.20	3.96	.66	.41	799	763.2	180.9	59.4
69.50	4.29	0.00	0.19	4.48	.61	.35	817	763.1	178.1	59.3
69.75	3.38	0.00	0.19	3.57	.70	.45	778	763.0	175.3	59.3
70.00	2.99	0.00	0.18	3.17	.75	.51	758	762.8	172.5	59.2
70.25	3.82	0.00	0.18	4.00	.65	.41	805	762.7	169.8	59.1
70.50	4.25	0.00	0.17	4.42	.61	.36	820	762.5	167.1	59.0
70.75	4.06	0.00	0.17	4.23	.63	.38	810	762.4	164.5	58.8
71.00	3.77	0.00	0.16	3.93	.66	.41	798	762.2	162.0	58.7
71.25	3.38	0.00	0.15	3.53	.70	.47	783	762.0	159.6	58.5
71.50	2.99	0.00	0.14	3.13	.74	.53	766	761.8	157.2	58.3
71.75	3.01	0.00	0.14	3.15	.73	.53	774	761.6	154.9	58.1
72.00	3.13	0.00	0.13	3.26	.72	.51	777	761.4	152.6	57.9
72.25	3.05	0.00	0.13	3.18	.73	.52	769	761.2	150.4	57.7
72.50	2.76	0.00	0.12	2.88	.77	.56	749	760.9	148.3	57.5
72.75	2.78	0.00	0.12	2.90	.77	.56	753	760.7	146.3	57.2
73.00	2.80	0.00	0.11	2.91	.76	.56	752	760.4	144.3	57.0
73.25	2.83	0.00	0.10	2.93	.76	.56	753	760.2	142.4	56.7
73.50	2.64	0.00	0.10	2.74	.79	.59	738	759.9	140.5	56.5
73.75	2.36	0.00	0.09	2.45	.84	.64	705	759.7	138.7	56.2
74.00	2.48	0.00	0.09	2.57	.82	.61	700	759.4	136.9	55.9
74.25	3.63	0.00	0.08	3.71	.67	.44	786	759.1	135.2	55.6
74.50	4.47	0.00	0.08	4.55	.58	.35	823	758.8	133.6	55.3
74.75	4.80	0.00	0.07	4.87	.56	.32	828	758.5	132.0	55.0
75.00	4.73	0.00	0.07	4.80	.56	.32	824	758.2	130.4	54.7
75.25	4.75	0.00	0.06	4.81	.56	.33	828	757.9	128.9	54.4
75.50	4.67	0.00	0.06	4.73	.56	.34	828	757.6	127.4	54.1
75.75	4.59	0.00	0.05	4.64	.57	.35	824	757.2	126.0	53.8
76.00	4.62	0.00	0.05	4.67	.56	.34	825	756.9	124.6	53.4
76.25	4.65	0.00	0.05	4.70	.56	.34	828	756.6	123.2	53.1
76.50	4.67	0.00	0.04	4.71	.56	.34	828	756.2	121.9	52.8
76.75	4.70	0.00	0.04	4.74	.56	.33	825	755.9	120.6	52.4
77.00	4.52	0.00	0.04	4.56	.58	.34	815	755.5	119.3	52.1
77.25	4.34	0.00	0.03	4.37	.59	.37	810	755.1	118.1	51.8
38977.50	4.16	0.00	0.03	4.19	-17.60	-17.39	804	754.8	116.9	51.4
78.00	4.22	0.00	0.02	4.24	.60	.39	805	754.0	114.5	50.7
78.50	4.30	0.00	0.01	4.31	.59	.38	808	753.2	112.3	50.0
79.00	4.44	0.00	0.00	4.44	.57	.37	814	752.4	110.1	49.3
79.50	4.63	0.00	-0.02	4.61	.56	.35	814	751.6	108.1	48.5
80.00	4.69	0.00	-0.03	4.66	.56	.34	811	750.8	106.0	47.8
80.50	4.75	0.00	-0.04	4.71	.55	.34	812	749.9	104.1	47.1
81.00	4.84	0.00	-0.06	4.78	.54	.33	815	749.0	102.2	46.3
81.50	4.93	0.00	-0.07	4.86	.53	.33	816	748.1	100.4	45.6
82.00	5.00	0.00	-0.09	4.91	.52	.32	815	747.2	98.6	44.8
82.50	5.07	0.00	-0.10	4.97	.51	.32	816	746.3	96.9	44.1
83.00	5.11	0.00	-0.12	4.99	.51	.32	816	745.3	95.2	43.3
83.50	5.03	0.00	-0.13	4.90	.51	.33	812	744.4	93.5	42.5
84.00	4.97	0.00	-0.15	4.82	.52	.34	808	743.4	91.9	41.8
84.50	4.92	0.00	-0.16	4.76	.52	.34	803	742.5	90.3	41.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38985.00	4.89	0.00	-0.17	4.72	-17.52	-17.35	802	741.5	88.7	40.2
85.50	5.12	0.00	-0.19	4.93	.50	.33	810	740.5	87.2	39.5
86.00	4.82	0.00	-0.20	4.62	.52	.36	796	739.5	85.7	38.7
86.50	4.84	0.00	-0.21	4.63	.52	.35	792	738.5	84.2	37.9
87.00	4.87	0.00	-0.22	4.65	.52	.35	792	737.5	82.7	37.1
38987.25	4.99	0.00	-0.22	4.77	-17.50	-17.34	796	737.0	82.0	36.7
87.50	4.93	0.00	-0.23	4.70	.51	.35	794	736.5	81.3	36.4
87.75	5.07	0.00	-0.23	4.84	.49	.34	799	735.9	80.6	36.0
88.00	5.22	0.00	-0.24	4.98	.48	.33	801	735.4	79.9	35.6
88.25	5.26	0.00	-0.24	5.02	.48	.32	800	734.9	79.2	35.2
88.50	5.20	0.00	-0.24	4.96	.48	.33	799	734.4	78.5	34.8
88.75	5.45	0.00	-0.24	5.21	.45	.31	808	733.9	77.8	34.4
89.00	5.39	0.00	-0.25	5.14	.46	.31	803	733.4	77.1	34.0
89.25	5.54	0.00	-0.25	5.29	.45	.29	806	732.9	76.4	33.6
89.50	5.99	0.00	-0.25	5.74	.41	.25	819	732.4	75.7	33.2
89.75	7.47	0.00	-0.26	7.21	.31	.16	852	731.9	75.0	32.9
90.00	6.18	0.00	-0.26	5.92	.39	.25	822	731.4	74.4	32.5
90.25	4.90	0.00	-0.26	4.64	.50	.36	782	730.9	73.7	32.1
90.50	4.74	0.00	-0.26	4.48	.51	.38	777	730.4	73.0	31.7
90.75	6.22	0.00	-0.26	5.96	.38	.25	822	729.9	72.4	31.3
91.00	7.29	0.00	-0.26	7.03	.30	.15	847	729.4	71.7	30.9
91.25	7.44	0.00	-0.26	7.18	.29	.13	853	728.9	71.0	30.5
91.50	8.71	0.00	-0.26	8.45	.22	.07	873	728.4	70.4	30.1
91.75	10.40	0.00	-0.26	10.14	.14	.00	896	727.9	69.7	29.7
92.00	7.37	0.00	-0.26	7.11	.29	.15	847	727.4	69.1	29.3
92.25	6.70	0.00	-0.26	6.44	.33	.20	831	726.9	68.4	29.0
92.50	6.24	0.00	-0.26	5.98	.36	.24	819	726.4	67.8	28.6
92.75	6.08	0.00	-0.26	5.82	.37	.24	815	725.9	67.1	28.2
93.00	6.95	0.00	-0.26	6.69	.31	.18	836	725.4	66.5	27.8
93.25	8.95	0.00	-0.26	8.69	.19	.06	873	724.9	65.9	27.4
93.50	9.10	0.00	-0.26	8.84	.18	.06	874	724.5	65.2	27.0
93.75	6.28	0.00	-0.26	6.02	.35	.23	817	724.0	64.6	26.6
94.00	5.82	0.00	-0.26	5.56	.39	.28	803	723.5	64.0	26.2
94.25	5.15	0.00	-0.26	4.89	.44	.34	782	723.0	63.3	25.8
94.50	5.31	0.00	-0.25	5.06	.42	.32	787	722.6	62.7	25.4
94.75	5.77	0.00	-0.25	5.52	.38	.28	800	722.1	62.1	25.1
95.00	5.82	0.00	-0.25	5.57	.38	.28	801	721.7	61.5	24.7
95.25	6.28	0.00	-0.24	6.04	.34	.24	813	721.2	60.8	24.3
95.50	6.13	0.00	-0.24	5.89	.35	.26	808	720.7	60.2	23.9
95.75	6.08	0.00	-0.24	5.84	.35	.26	806	720.3	59.6	23.5
96.00	6.03	0.00	-0.24	5.79	.35	.25	806	719.9	59.0	23.1
96.25	6.31	0.00	-0.23	6.08	.32	.22	816	719.4	58.4	22.7
96.50	7.03	-0.11	-0.23	6.70	.28	.18	830	719.0	57.8	22.3
96.75	7.04	-0.24	-0.23	6.57	.29	.20	823	718.6	57.2	21.9
97.00	6.85	-0.40	-0.22	6.23	.31	.23	813	718.1	56.6	21.6
97.25	6.75	-0.53	-0.22	6.00	.32	.23	809	717.7	55.9	21.2
97.50	6.65	-0.64	-0.22	5.79	.33	.25	805	717.3	55.3	20.8
97.75	6.65	-0.77	-0.21	5.67	.34	.26	799	716.9	54.7	20.4
98.00	6.96	-0.89	-0.21	5.85	.33	.25	803	716.5	54.1	20.0
98.25	8.59	-1.01	-0.20	7.38	.22	.14	837	716.1	53.5	19.6
98.50	8.48	-1.12	-0.20	7.16	.24	.16	831	715.7	52.9	19.2
98.75	8.27	-1.26	-0.19	6.82	.26	.19	823	715.3	52.3	18.8
99.00	7.96	-1.37	-0.19	6.40	.29	.22	812	714.9	51.7	18.5
99.25	7.84	-1.47	-0.18	6.19	.30	.23	806	714.5	51.1	18.1
99.50	8.03	-1.58	-0.18	6.28	.29	.23	808	714.2	50.6	17.7
99.75	8.22	-1.68	-0.17	6.37	.28	.22	810	713.8	50.0	17.3
39000.00	8.46	-1.79	-0.17	6.50	-17.27	-17.21	813	713.4	49.4	16.9
00.50	8.70	-1.94	-0.16	6.60	.26	.20	814	712.8	48.2	16.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39001.00	8.78	-2.07	-0.15	6.56	-17.26	-17.21	811	712.1	47.0	15.3
01.50	8.87	-2.12	-0.14	6.61	.26	.20	811	711.5	45.8	14.6
02.00	9.19	-2.20	-0.13	6.86	.23	.18	817	710.9	44.7	13.8
02.50	9.85	-2.21	-0.12	7.52	.19	.14	830	710.3	43.5	13.0
03.00	10.25	-2.21	-0.10	7.94	.16	.11	836	709.7	42.3	12.2
03.50	10.38	-2.21	-0.08	8.09	.15	.10	840	709.2	41.2	11.5
04.00	10.34	-2.20	-0.07	8.08	.15	.10	838	708.7	40.0	10.7
04.50	10.25	-2.09	-0.06	8.10	.15	.11	835	708.3	38.9	9.9
05.00	10.17	-2.01	-0.04	8.12	.14	.10	835	707.9	37.7	9.2
05.50	10.03	-1.91	-0.02	8.09	.14	.11	833	707.5	36.6	8.4
06.00	9.77	-1.87	-0.01	7.89	.15	.12	828	707.1	35.4	7.6
06.50	9.60	-1.79	0.01	7.83	.16	.12	825	706.8	34.3	6.8
39006.75	9.26	-1.71	0.02	7.57	-17.17	-17.14	819	706.7	33.7	6.5
07.00	9.48	-1.68	0.03	7.83	.15	.12	824	706.5	33.1	6.1
07.25	9.90	-1.62	0.04	8.32	.12	.09	835	706.4	32.6	5.7
07.50	11.75	-1.57	0.05	10.23	.02	-16.99	865	706.3	32.0	5.3
07.75	12.98	-1.50	0.06	11.53	-16.97	.94	882	706.2	31.4	4.9
08.00	13.69	-1.46	0.06	12.29	.94	.91	889	706.1	30.9	4.5
08.25	11.54	-1.39	0.07	10.22	-17.02	.99	863	706.0	30.3	4.1
08.50	10.51	-1.35	0.08	9.25	.07	-17.04	848	705.9	29.7	3.8
08.75	10.19	-1.27	0.09	9.01	.08	.05	843	705.9	29.2	3.4
09.00	10.08	-1.19	0.10	8.99	.08	.05	841	705.8	28.6	3.0
09.25	10.37	-1.14	0.11	9.35	.06	.04	846	705.8	28.0	2.6
09.50	10.86	-1.05	0.12	9.93	.04	.01	854	705.7	27.5	2.2
09.75	10.53	-1.00	0.13	9.67	.05	.02	851	705.7	26.9	1.8
10.00	10.10	-0.94	0.14	9.30	.06	.03	847	705.7	26.3	1.5
10.25	9.66	-0.84	0.15	8.97	.08	.05	839	705.6	25.8	1.1
10.50	9.73	-0.79	0.16	9.10	.08	.05	839	705.6	25.2	0.7
10.75	9.80	-0.73	0.17	9.24	.07	.04	841	705.6	24.6	0.3
11.00	9.66	-0.64	0.18	9.19	.07	.04	841	705.7	24.1	-0.1
11.25	9.10	-0.56	0.19	8.73	.09	.07	832	705.7	23.5	-0.5
11.50	8.44	-0.50	0.20	8.14	.13	.10	820	705.7	22.9	-0.9
11.75	8.19	-0.43	0.21	7.97	.14	.11	816	705.8	22.4	-1.2
12.00	8.03	-0.35	0.22	7.90	.14	.11	814	705.8	21.8	-1.6
12.25	8.28	-0.28	0.23	8.23	.12	.10	819	705.9	21.2	-2.0
12.50	8.43	-0.22	0.24	8.44	.11	.08	822	706.0	20.7	-2.4
12.75	8.26	-0.14	0.25	8.37	.12	.09	820	706.0	20.1	-2.8
13.00	8.09	-0.07	0.26	8.28	.12	.09	818	706.1	19.5	-3.2
13.25	7.71	0.00	0.27	7.98	.14	.11	812	706.2	19.0	-3.5
13.50	7.53	0.09	0.28	7.91	.14	.11	810	706.3	18.4	-3.9
13.75	7.35	0.16	0.30	7.81	.15	.12	807	706.4	17.8	-4.3
14.00	7.27	0.22	0.31	7.80	.15	.12	806	706.6	17.3	-4.7
14.25	6.97	0.33	0.32	7.62	.16	.13	802	706.7	16.7	-5.1
14.50	6.98	0.39	0.33	7.69	.16	.13	803	706.8	16.2	-5.5
14.75	7.59	0.46	0.35	8.41	.12	.09	816	707.0	15.6	-5.8
15.00	8.93	0.53	0.36	9.81	.05	.02	839	707.2	15.0	-6.2
15.25	10.77	0.61	0.37	11.75	-16.97	-16.93	866	707.3	14.5	-6.6
15.50	9.96	0.67	0.38	11.01	-17.00	.96	856	707.5	13.9	-7.0
15.75	8.42	0.77	0.39	9.58	.06	-17.03	834	707.7	13.3	-7.4
16.00	8.22	0.82	0.40	9.44	.07	.03	832	707.9	12.8	-7.8
16.25	8.22	0.90	0.41	9.53	.06	.02	834	708.1	12.2	-8.1
16.50	8.53	0.98	0.42	9.92	.05	.01	838	708.3	11.6	-8.5
16.75	8.73	1.05	0.43	10.21	.04	.00	840	708.6	11.1	-8.9
17.00	8.32	1.12	0.44	9.88	.05	.01	835	708.8	10.5	-9.3
17.25	7.70	1.20	0.46	9.36	.08	.04	827	709.0	10.0	-9.7
17.50	6.99	1.28	0.47	8.74	.11	.07	816	709.3	9.4	-10.1
17.75	7.09	1.38	0.48	8.94	.10	.06	819	709.5	8.8	-10.4
18.00	7.29	1.44	0.49	9.22	.09	.04	823	709.8	8.3	-10.8
18.25	7.59	1.50	0.50	9.60	.07	.02	829	710.1	7.7	-11.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39018.50	8.10	1.59	0.51	10.20	-17.04	-17.00	837	710.4	7.1	-11.6
18.75	8.61	1.66	0.53	10.80	.02	-16.97	846	710.7	6.6	-12.0
19.00	10.45	1.74	0.54	12.74	-16.94	.89	871	711.0	6.0	-12.4
19.25	17.21	1.82	0.55	19.57	.75	.69	932	711.3	5.4	-12.7
19.50	13.31	1.90	0.56	15.78	.84	.78	903	711.6	4.9	-13.1
19.75	10.44	1.99	0.57	13.00	.93	.87	875	711.9	4.3	-13.5
20.00	9.11	2.07	0.58	11.76	.98	.92	859	712.2	3.7	-13.9
20.25	8.80	2.14	0.59	11.54	.99	.93	855	712.6	3.2	-14.3
20.50	8.19	2.24	0.60	11.02	-17.01	.95	847	712.9	2.6	-14.7
20.75	7.98	2.31	0.61	10.90	.02	.96	845	713.3	2.0	-15.0
21.00	7.87	2.40	0.62	10.89	.02	.96	844	713.6	1.4	-15.4
21.25	8.08	2.47	0.63	11.18	.01	.95	847	714.0	0.9	-15.8
21.50	8.38	2.55	0.64	11.58	.00	.94	851	714.4	0.3	-16.2
21.75	7.97	2.64	0.65	11.26	.02	.95	846	714.7	359.7	-16.6
22.00	7.66	2.70	0.66	11.02	.02	.95	844	715.1	359.2	-17.0
22.25	7.15	2.81	0.67	10.63	.04	.97	838	715.5	358.6	-17.3
22.50	6.74	2.86	0.68	10.28	.06	.98	832	715.9	358.0	-17.7
22.75	6.12	2.95	0.69	9.77	.08	-17.00	824	716.3	357.5	-18.1
23.00	5.61	3.03	0.70	9.34	.10	.02	817	716.8	356.9	-18.5
39023.50	5.51	3.17	0.71	9.40	-17.10	-17.03	816	717.6	355.7	-19.2
24.00	4.42	3.32	0.73	8.47	.15	.07	798	718.5	354.6	-20.0
24.50	4.06	3.46	0.75	8.27	.16	.09	794	719.4	353.4	-20.8
25.00	3.54	3.62	0.76	7.91	.19	.11	786	720.3	352.3	-21.5
25.50	3.73	3.76	0.78	8.27	.17	.08	793	721.3	351.1	-22.3
26.00	3.69	3.91	0.79	8.39	.17	.08	795	722.2	350.0	-23.1
26.50	3.55	4.04	0.81	8.40	.17	.08	793	723.2	348.8	-23.8
27.00	3.50	4.17	0.82	8.49	.17	.07	794	724.2	347.6	-24.6
27.50	3.60	4.29	0.84	8.73	.16	.06	798	725.3	346.4	-25.4
28.00	3.48	4.32	0.86	8.66	.17	.06	796	726.3	345.3	-26.1
28.50	3.56	4.52	0.87	8.95	.15	.04	802	727.4	344.1	-26.9
29.00	3.47	4.65	0.89	9.01	.15	.04	803	728.5	342.9	-27.7
29.50	3.57	4.76	0.90	9.23	.15	.03	807	729.6	341.7	-28.4
30.00	3.57	4.86	0.91	9.33	.14	.02	808	730.7	340.5	-29.2
39030.20	3.56	4.91	0.91	9.38	-17.14	-17.01	809	731.1	340.0	-29.5
30.40	3.82	4.94	0.92	9.68	.13	.00	815	731.6	339.6	-29.8
30.60	4.57	4.97	0.93	10.47	.09	-16.97	831	732.0	339.1	-30.1
30.80	4.83	5.01	0.93	10.77	.09	.96	833	732.5	338.6	-30.4
31.00	6.69	5.04	0.94	12.67	.02	.87	856	732.9	338.1	-30.7
31.20	8.71	5.08	0.94	14.73	-16.95	.79	880	733.4	337.6	-31.0
31.40	8.50	5.11	0.95	14.55	.96	.80	878	733.8	337.1	-31.3
31.60	5.24	5.16	0.95	11.36	-17.07	.91	840	734.3	336.6	-31.6
31.80	5.19	5.19	0.96	11.34	.07	.92	839	734.8	336.2	-31.9
39032.00	4.23	5.24	0.96	10.44	-17.11	-16.96	826	735.2	335.7	-32.2
32.25	3.14	5.27	0.96	9.37	.15	-17.01	809	735.8	335.1	-32.6
32.50	2.88	5.34	0.97	9.19	.16	.02	808	736.4	334.4	-33.0
32.75	2.72	5.37	0.97	9.06	.17	.02	804	737.0	333.8	-33.4
33.00	2.66	5.43	0.98	9.07	.17	.02	805	737.6	333.2	-33.8
33.25	2.29	5.48	0.98	8.75	.19	.04	799	738.2	332.6	-34.1
33.50	1.73	5.54	0.99	8.26	.21	.06	790	738.8	332.0	-34.5
33.75	1.16	5.57	0.99	7.72	.24	.09	780	739.4	331.3	-34.9
34.00	0.60	5.61	0.99	7.20	.27	.13	769	739.9	330.7	-35.3
34.25	0.24	5.66	1.00	6.91	.29	.14	762	740.5	330.1	-35.7
34.50	0.30	5.70	1.00	7.00	.28	.14	764	741.1	329.5	-36.1
34.75	0.46	5.75	1.00	7.21	.27	.12	769	741.7	328.8	-36.4
35.00	0.42	5.79	1.00	7.21	.27	.12	768	742.3	328.2	-36.8
35.25	2.22	5.83	1.00	9.05	.18	.01	805	742.9	327.6	-37.2
35.50	2.08	5.89	1.00	8.96	.19	.00	803	743.5	326.9	-37.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39035.75	2.55	5.92	1.01	9.48	-17.17	-16.98	813	744.1	326.3	-38.0
36.00	3.64	5.97	1.01	10.62	.12	.93	832	744.7	325.6	-38.3
36.25	2.79	6.00	1.01	9.80	.16	.97	819	745.3	325.0	-38.7
36.50	1.33	6.02	1.01	8.36	.22	-17.04	794	745.9	324.3	-39.1
36.75	1.30	6.07	1.01	8.38	.22	.04	796	746.5	323.7	-39.5
37.00	1.17	6.11	1.01	8.29	.22	.05	795	747.1	323.0	-39.9
37.25	1.03	6.14	1.02	8.19	.23	.05	793	747.7	322.4	-40.2
37.50	0.73	6.18	1.02	7.93	.24	.07	788	748.3	321.7	-40.6
37.75	0.73	6.20	1.02	7.95	.24	.07	790	748.9	321.0	-41.0
38.00	0.63	6.22	1.02	7.88	.25	.07	788	749.5	320.3	-41.4
38.25	0.54	6.25	1.02	7.81	.26	.07	783	750.1	319.7	-41.8
38.50	0.55	6.28	1.02	7.85	.26	.06	783	750.7	319.0	-42.1
38.75	0.56	6.31	1.02	7.89	.26	.05	783	751.3	318.3	-42.5
39.00	0.58	6.32	1.02	7.91	.26	.05	785	751.8	317.6	-42.9
39.25	0.39	6.34	1.01	7.74	.26	.07	784	752.4	316.9	-43.3
39.50	0.41	6.36	1.01	7.78	.26	.07	788	753.0	316.2	-43.7
39.75	0.43	6.37	1.01	7.81	.25	.07	790	753.6	315.5	-44.0
40.00	0.15	6.39	1.01	7.55	.27	.09	784	754.2	314.8	-44.4
40.25	0.18	6.40	1.01	7.59	.27	.08	787	754.7	314.1	-44.8
40.50	0.11	6.40	1.01	7.52	.27	.09	783	755.3	313.4	-45.2
40.75	0.25	6.41	1.00	7.66	.27	.07	781	755.9	312.7	-45.5
41.00	0.39	6.41	1.00	7.80	.27	.06	783	756.4	312.0	-45.9
41.25	0.84	6.41	1.00	8.25	.25	.03	792	757.0	311.3	-46.3
41.50	0.88	6.40	1.00	8.28	.25	.02	792	757.6	310.5	-46.7
41.75	0.52	6.40	0.99	7.91	.26	.05	788	758.1	309.8	-47.0
42.00	0.37	6.39	0.99	7.75	.27	.06	783	758.7	309.0	-47.4
42.25	0.12	6.37	0.98	7.47	.29	.07	776	759.2	308.3	-47.8
42.50	-0.02	6.34	0.98	7.29	.30	.09	776	759.8	307.5	-48.2
42.75	-0.27	6.32	0.98	7.03	.31	.11	775	760.3	306.8	-48.5
43.00	-0.40	6.31	0.97	6.87	.31	.12	774	760.8	306.0	-48.9
43.25	-0.64	6.28	0.97	6.62	.33	.14	766	761.4	305.2	-49.3
43.50	-0.67	6.23	0.96	6.53	.34	.14	763	761.9	304.4	-49.6
43.75	-0.89	6.20	0.96	6.27	.36	.16	755	762.4	303.6	-50.0
44.00	-1.11	6.17	0.95	6.00	.38	.18	745	762.9	302.8	-50.4
44.25	-1.13	6.12	0.95	5.94	.38	.18	743	763.4	302.0	-50.8
44.50	-1.24	6.07	0.95	5.79	.39	.19	739	764.0	301.2	-51.1
44.75	-1.24	5.99	0.94	5.69	.40	.20	735	764.5	300.4	-51.5
45.00	-1.45	5.95	0.93	5.43	.42	.22	722	765.0	299.5	-51.9
45.25	-1.54	5.88	0.93	5.26	.44	.23	707	765.4	298.7	-52.2
45.50	-1.74	5.79	0.92	4.97	.47	.25	685	765.9	297.8	-52.6
45.75	-1.62	5.72	0.92	5.02	.46	.25	694	766.4	296.9	-53.0
46.00	-1.80	5.63	0.91	4.74	.48	.27	678	766.9	296.0	-53.3
46.25	-1.67	5.54	0.91	4.77	.48	.27	675	767.3	295.1	-53.7
46.50	-0.01	5.44	0.90	6.34	.36	.14	756	767.8	294.2	-54.0
46.75	-0.17	5.33	0.90	6.05	.38	.16	748	768.2	293.3	-54.4
47.00	-0.34	5.22	0.89	5.78	.40	.18	735	768.7	292.4	-54.8
47.25	-0.60	5.09	0.89	5.38	.43	.21	712	769.1	291.4	-55.1
47.50	-0.95	4.96	0.88	4.89	.47	.25	683	769.6	290.5	-55.5
47.75	-0.89	4.82	0.88	4.81	.48	.26	686	770.0	289.5	-55.8
48.00	-0.83	4.68	0.87	4.72	.48	.27	692	770.4	288.5	-56.2
48.25	-0.76	4.52	0.86	4.62	.49	.28	691	770.8	287.5	-56.5
48.50	-0.89	4.35	0.86	4.32	.52	.31	670	771.2	286.4	-56.9
48.75	-0.80	4.18	0.85	4.23	.53	.32	670	771.6	285.4	-57.2
49.00	-0.71	3.99	0.85	4.13	.54	.33	666	772.0	284.3	-57.6
49.25	-0.62	3.79	0.84	4.01	.55	.35	657	772.4	283.2	-57.9
49.50	-0.42	3.57	0.83	3.99	.55	.35	653	772.8	282.1	-58.3
49.75	-0.21	3.33	0.83	3.96	.56	.35	646	773.1	281.0	-58.6
50.00	-0.09	3.09	0.82	3.82	.57	.36	623	773.5	279.8	-58.9
50.25	-0.07	2.85	0.81	3.59	.60	.39	593	773.9	278.6	-59.3
50.50	0.26	2.61	0.80	3.67	.59	.38	616	774.2	277.4	-59.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39050.75	0.40	2.38	0.79	3.56	-17.60	-17.39	599	774.5	276.1	-59.9
51.00	0.64	2.13	0.78	3.55	.61	.39	601	774.9	274.8	-60.2
51.25	2.73	1.67	0.77	5.37	.43	.20	730	775.2	273.5	-60.6
51.50	3.71	1.62	0.76	6.09	.38	.14	758	775.5	272.2	-60.9
51.75	3.26	1.38	0.75	5.38	.43	.20	733	775.8	270.8	-61.2
52.00	3.32	1.06	0.74	5.15	.44	.23	730	776.1	269.4	-61.5
52.25	3.40	0.82	0.73	4.95	.46	.25	726	776.4	267.9	-61.8
52.50	3.38	0.56	0.73	4.67	.49	.27	703	776.6	266.4	-62.1
52.75	3.37	0.27	0.72	4.36	.52	.29	664	776.9	264.9	-62.4
53.00	3.36	0.00	0.71	4.07	.55	.32	642	777.2	263.3	-62.7
53.25	3.37	0.00	0.70	4.07	.55	.33	665	777.4	261.7	-62.9
53.50	3.48	0.00	0.69	4.17	.54	.32	675	777.7	260.0	-63.2
53.75	3.50	0.00	0.68	4.18	.53	.32	677	777.9	258.2	-63.5
54.00	3.42	0.00	0.66	4.08	.55	.33	665	778.1	256.4	-63.7
54.25	3.46	0.00	0.65	4.11	.54	.32	665	778.4	254.6	-64.0
54.50	3.40	0.00	0.64	4.04	.55	.33	661	778.6	252.7	-64.2
54.75	3.45	0.00	0.63	4.08	.55	.32	670	778.8	250.7	-64.5
55.00	3.51	0.00	0.62	4.13	.54	.32	682	779.0	248.6	-64.7
55.25	3.78	0.00	0.61	4.39	.52	.29	691	779.1	246.5	-64.9
55.50	4.48	0.00	0.60	5.08	.46	.21	718	779.3	244.4	-65.1
55.75	5.58	0.00	0.59	6.17	.38	.11	763	779.5	242.1	-65.3
56.00	8.03	0.00	0.58	8.61	.24	-16.96	829	779.6	239.8	-65.5
56.25	7.74	0.00	0.56	8.30	.26	.97	822	779.8	237.4	-65.6
56.50	6.33	0.00	0.55	6.88	.34	-17.05	783	779.9	234.9	-65.8
56.75	5.95	0.00	0.54	6.49	.37	.07	766	780.0	232.4	-65.9
57.00	5.87	0.00	0.53	6.40	.38	.07	764	780.1	229.8	-66.0
57.25	5.90	0.00	0.51	6.41	.37	.07	765	780.3	227.1	-66.1
57.50	5.31	0.00	0.50	5.81	.41	.12	746	780.4	224.4	-66.2
57.75	5.64	0.00	0.49	6.13	.39	.10	762	780.4	221.6	-66.3
58.00	5.77	0.00	0.47	6.24	.38	.09	764	780.5	218.7	-66.3
58.25	6.31	0.00	0.46	6.77	.35	.05	783	780.6	215.8	-66.4
58.50	6.14	0.00	0.45	6.59	.36	.07	779	780.7	212.9	-66.4
58.75	6.06	0.00	0.44	6.50	.36	.08	778	780.7	209.9	-66.4
59.00	5.68	0.00	0.43	6.11	.39	.11	765	780.8	206.9	-66.3
59.25	5.20	0.00	0.41	5.61	.43	.14	742	780.8	203.8	-66.3
59.50	5.12	0.00	0.40	5.52	.43	.15	743	780.8	200.8	-66.2
59.75	5.15	0.00	0.39	5.54	.42	.17	758	780.9	197.8	-66.1
60.00	5.18	0.00	0.38	5.56	.42	.16	759	780.9	194.8	-66.0
60.25	5.01	0.00	0.37	5.38	.44	.17	746	780.9	191.8	-65.8
60.50	5.04	0.00	0.35	5.39	.44	.17	746	780.9	188.8	-65.6
60.75	5.17	0.00	0.34	5.51	.43	.15	748	780.9	185.8	-65.5
61.00	5.91	0.00	0.33	6.24	.38	.10	775	780.8	183.0	-65.3
61.25	6.35	0.00	0.31	6.66	.36	.06	784	780.8	180.1	-65.0
61.50	5.97	0.00	0.30	6.27	.38	.08	768	780.8	177.3	-64.8
61.75	5.90	0.00	0.29	6.19	.39	.09	767	780.7	174.6	-64.5
62.00	5.22	0.00	0.27	5.49	.44	.14	739	780.7	172.0	-64.2
62.25	4.73	0.00	0.26	4.99	.47	.19	720	780.6	169.4	-63.9
62.50	4.56	0.00	0.25	4.81	.48	.22	720	780.5	166.9	-63.6
62.75	4.59	0.00	0.24	4.83	.48	.23	729	780.4	164.5	-63.3
63.00	4.62	0.00	0.22	4.84	.48	.22	722	780.3	162.1	-63.0
63.25	4.86	0.00	0.21	5.07	.47	.19	723	780.2	159.8	-62.6
63.50	4.89	0.00	0.20	5.09	.47	.18	716	780.1	157.6	-62.3
63.75	5.02	0.00	0.19	5.21	.46	.17	730	780.0	155.4	-61.9
64.00	5.05	0.00	0.17	5.22	.45	.18	737	779.9	153.3	-61.5
64.25	5.08	0.00	0.16	5.24	.45	.18	736	779.8	151.3	-61.1
64.50	5.31	0.00	0.15	5.46	.43	.16	750	779.6	149.3	-60.7
64.75	5.14	0.00	0.14	5.28	.45	.18	745	779.5	147.4	-60.3
65.00	5.27	0.00	0.14	5.41	.44	.16	745	779.3	145.6	-59.8
65.25	5.10	0.00	0.13	5.23	.45	.18	739	779.2	143.8	-59.4
65.50	5.23	0.00	0.12	5.35	.44	.18	753	779.0	142.1	-59.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39065.75	5.16	0.00	0.12	5.28	-17.45	-17.18	747	778.8	140.4	-58.5
66.00	5.08	0.00	0.11	5.19	.46	.18	736	778.7	138.8	-58.1
66.25	5.11	0.00	0.10	5.21	.46	.17	734	778.5	137.2	-57.6
66.50	5.14	0.00	0.10	5.24	.45	.18	742	778.3	135.7	-57.1
66.75	4.96	0.00	0.09	5.05	.47	.19	731	778.1	134.2	-56.7
67.00	4.99	0.00	0.09	5.08	.47	.19	730	777.9	132.7	-56.2
67.25	5.12	0.00	0.08	5.20	.45	.18	742	777.6	131.3	-55.7
67.50	5.35	0.00	0.08	5.43	.43	.17	758	777.4	129.9	-55.2
67.75	5.38	0.00	0.07	5.45	.43	.17	761	777.2	128.6	-54.7
68.00	5.71	0.00	0.07	5.78	.40	.15	775	777.0	127.3	-54.2
68.25	5.94	0.00	0.06	6.00	.39	.12	773	776.7	126.0	-53.8
68.50	5.76	0.00	0.06	5.82	.42	.11	758	776.5	124.8	-53.3
68.75	5.69	0.00	0.05	5.74	.42	.12	756	776.2	123.5	-52.8
69.00	6.12	0.00	0.05	6.17	.38	.10	778	776.0	122.3	-52.2
69.25	7.17	0.00	0.05	7.22	.31	.04	813	775.7	121.2	-51.7
69.50	8.01	0.00	0.04	8.05	.27	-16.99	830	775.4	120.0	-51.2
69.75	8.24	0.00	0.04	8.28	.26	.96	830	775.1	118.9	-50.7
70.00	10.00	0.00	0.04	10.04	.18	.86	858	774.9	117.8	-50.2
70.25	8.59	0.00	0.03	8.62	.25	.91	832	774.6	116.7	-49.7
70.50	7.59	0.00	0.03	7.62	.30	.98	810	774.3	115.6	-49.2
70.75	7.10	0.00	0.03	7.13	.33	-17.03	801	774.0	114.6	-48.7
71.00	8.14	0.00	0.02	8.16	.27	-16.97	825	773.7	113.6	-48.1
71.25	9.08	0.00	0.02	9.10	.23	.91	842	773.4	112.6	-47.6
71.50	9.20	0.00	0.02	9.22	.22	.91	845	773.0	111.6	-47.1
71.75	6.97	0.00	0.02	6.99	.33	-17.04	798	772.7	110.6	-46.6
72.00	6.68	0.00	0.02	6.70	.35	.06	793	772.4	109.6	-46.0
72.25	6.60	0.00	0.01	6.61	.36	.07	791	772.1	108.7	-45.5
72.50	6.51	0.00	0.01	6.52	.36	.08	791	771.7	107.8	-45.0
72.75	6.53	0.00	0.01	6.54	.36	.08	791	771.4	106.8	-44.5
73.00	6.54	0.00	0.01	6.55	.36	.07	788	771.1	105.9	-43.9
73.25	6.15	0.00	0.00	6.15	.39	.09	773	770.7	105.0	-43.4
73.50	5.95	0.00	0.00	5.95	.40	.11	767	770.4	104.1	-42.9
73.75	5.97	0.00	0.00	5.97	.40	.13	771	770.0	103.3	-42.3
74.00	5.88	0.00	0.00	5.88	.40	.14	770	769.5	102.4	-41.8
74.25	5.68	0.00	0.00	5.68	.41	.16	765	769.3	101.5	-41.3
74.50	5.59	0.00	0.00	5.59	.42	.17	762	768.9	100.7	-40.7
74.75	5.50	0.00	0.00	5.50	.43	.17	758	768.6	99.8	-40.2
75.00	5.40	0.00	0.00	5.40	.44	.18	754	768.2	99.0	-39.7
75.25	5.33	0.00	0.00	5.33	.44	.18	750	767.8	98.2	-39.1
75.50	5.35	0.00	-0.01	5.34	.44	.18	750	767.4	97.4	-38.6
75.75	5.36	0.00	-0.01	5.35	.44	.18	748	767.1	96.6	-38.0
76.00	5.59	0.00	-0.01	5.58	.43	.15	755	766.7	95.8	-37.5
76.25	6.02	0.00	-0.01	6.01	.39	.12	771	766.3	95.0	-37.0
76.50	6.14	0.00	-0.01	6.13	.38	.12	779	765.9	94.2	-36.4
76.75	6.16	0.00	-0.02	6.14	.38	.11	776	765.5	93.4	-35.9
77.00	5.98	0.00	-0.02	5.96	.40	.12	769	765.1	92.6	-35.3
77.25	6.20	0.00	-0.02	6.18	.38	.10	775	764.7	91.8	-34.8
77.50	6.43	0.00	-0.02	6.41	.37	.09	782	764.4	91.1	-34.3
77.75	6.66	0.00	-0.02	6.64	.35	.08	790	764.0	90.3	-33.7
78.00	7.20	0.00	-0.02	7.18	.32	.03	802	763.6	89.6	-33.2
78.25	7.43	0.00	-0.02	7.41	.30	.02	808	763.2	88.8	-32.7
78.50	7.14	0.00	-0.02	7.12	.32	.06	803	762.8	88.1	-32.1
78.75	6.56	0.00	-0.03	6.53	.35	.10	787	762.4	87.3	-31.6
79.00	6.38	0.00	-0.03	6.35	.36	.11	781	762.0	86.6	-31.0
79.25	6.41	0.00	-0.03	6.38	.36	.11	781	761.6	85.9	-30.5
79.50	6.43	0.00	-0.04	6.39	.36	.11	783	761.2	85.2	-30.0
79.75	6.05	0.00	-0.04	6.01	.38	.15	774	760.8	84.4	-29.4
80.00	5.77	0.00	-0.04	5.73	.41	.17	762	760.4	83.7	-28.9
80.25	5.80	0.00	-0.04	5.76	.40	.16	763	759.9	83.0	-28.3
80.50	5.73	0.00	-0.04	5.69	.41	.17	761	759.5	82.3	-27.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39080.75	5.65	0.00	-0.04	5.61	-17.41	-17.18	759	759.1	81.6	-27.3
81.00	5.79	0.00	-0.04	5.75	.40	.17	764	758.7	80.9	-26.7
81.25	5.92	0.00	-0.05	5.87	.39	.15	766	758.3	80.2	-26.2
81.50	6.15	0.00	-0.05	6.10	.38	.13	771	757.9	79.5	-25.7
81.75	6.39	0.00	-0.05	6.34	.36	.12	779	757.5	78.8	-25.1
82.00	6.52	0.00	-0.05	6.47	.35	.12	785	757.1	78.1	-24.6
82.25	6.55	0.00	-0.06	6.49	.35	.10	783	756.7	77.4	-24.0
82.50	6.58	0.00	-0.06	6.52	.35	.10	784	756.3	76.7	-23.5
82.75	6.51	0.00	-0.06	6.45	.35	.11	783	755.9	76.1	-23.0
83.00	6.64	0.00	-0.06	6.58	.34	.09	786	755.5	75.4	-22.4
83.25	6.77	0.00	-0.06	6.71	.33	.08	790	755.1	74.7	-21.9
83.50	7.42	0.00	-0.06	7.36	.29	.03	807	754.7	74.0	-21.4
83.75	9.18	0.00	-0.06	9.12	.19	-16.93	842	754.3	73.4	-20.8
84.00	7.99	0.00	-0.06	7.93	.25	-17.00	819	753.9	72.7	-20.3
84.25	8.63	0.00	-0.06	8.57	.22	-16.96	832	753.6	72.0	-19.7
84.50	8.66	0.00	-0.06	8.60	.21	.95	834	753.2	71.3	-19.2
84.75	8.89	0.00	-0.06	8.83	.20	.94	838	752.8	70.7	-18.7
85.00	9.33	0.00	-0.06	9.27	.18	.93	845	752.4	70.0	-18.1
85.25	8.23	0.00	-0.06	8.17	.24	.98	825	752.0	69.4	-17.6
85.50	7.65	0.00	-0.06	7.59	.27	-17.02	813	751.6	68.7	-17.1
85.75	7.27	0.00	-0.06	7.21	.29	.05	803	751.3	68.0	-16.5
86.00	6.78	0.00	-0.06	6.72	.32	.09	791	750.9	67.4	-16.0
86.25	6.50	0.00	-0.06	6.44	.34	.11	783	750.5	66.7	-15.5
86.50	6.33	0.00	-0.06	6.27	.35	.12	778	750.1	66.1	-14.9
86.75	6.25	0.00	-0.06	6.19	.35	.14	776	749.8	65.4	-14.4
87.00	5.87	0.00	-0.06	5.81	.38	.17	764	749.4	64.8	-13.9
87.25	5.18	0.00	-0.06	5.12	.43	.22	737	749.1	64.1	-13.3
87.50	4.69	0.00	-0.06	4.63	.48	.27	713	748.7	63.5	-12.8
87.75	5.33	0.00	-0.06	5.27	.42	.22	745	748.3	62.8	-12.3
88.00	5.97	0.00	-0.06	5.91	.37	.17	768	748.0	62.2	-11.7
88.25	6.71	0.00	-0.06	6.65	.32	.11	789	747.6	61.6	-11.2
88.50	6.63	0.00	-0.06	6.57	.32	.11	787	747.3	60.9	-10.7
88.75	6.34	0.00	-0.06	6.28	.34	.13	779	747.0	60.3	-10.2
89.00	6.26	0.00	-0.05	6.21	.34	.14	777	746.6	59.6	-9.6
89.25	6.28	0.00	-0.05	6.23	.34	.14	777	746.3	59.0	-9.1
89.50	6.20	0.00	-0.05	6.15	.35	.15	775	746.0	58.4	-8.6
89.75	6.32	0.00	-0.04	6.28	.34	.14	779	745.7	57.7	-8.0
90.00	6.85	0.00	-0.04	6.81	.30	.09	794	745.3	57.1	-7.5
90.25	7.07	-0.01	-0.04	7.02	.28	.08	799	745.0	56.5	-7.0
90.50	7.08	-0.02	-0.04	7.02	.28	.08	798	744.7	55.8	-6.5
90.75	7.00	-0.03	-0.03	6.93	.29	.09	796	744.4	55.2	-5.9
91.00	7.01	-0.05	-0.03	6.93	.29	.09	796	744.1	54.6	-5.4
91.25	6.92	-0.07	-0.02	6.83	.29	.10	794	743.8	53.9	-4.9
91.50	7.04	-0.08	-0.02	6.93	.29	.09	797	743.5	53.3	-4.3
91.75	6.94	-0.09	-0.01	6.84	.29	.10	795	743.3	52.7	-3.8
92.00	7.06	-0.09	-0.01	6.95	.28	.08	798	743.0	52.1	-3.3
92.25	7.27	-0.11	0.00	7.16	.27	.07	803	742.7	51.4	-2.8
92.50	7.17	-0.11	0.00	7.07	.27	.09	801	742.4	50.8	-2.2
92.75	7.08	-0.12	0.01	6.97	.28	.09	799	742.2	50.2	-1.7
93.00	6.98	-0.12	0.01	6.88	.28	.09	797	741.9	49.6	-1.2
93.25	7.19	-0.12	0.02	7.10	.27	.08	803	741.7	48.9	-0.7
93.50	7.30	-0.13	0.02	7.19	.26	.07	805	741.4	48.3	-0.2
93.75	7.30	-0.13	0.03	7.20	.26	.07	805	741.2	47.7	0.4
94.00	7.40	-0.13	0.04	7.31	.25	.06	808	740.9	47.1	0.9
94.25	7.50	-0.14	0.04	7.40	.25	.06	809	740.7	46.4	1.4
94.50	7.80	-0.14	0.05	7.72	.23	.04	816	740.5	45.8	1.9
39094.60	8.56	-0.14	0.05	8.47	-17.19	-17.41	830	740.4	45.6	2.1
94.80	8.39	-0.13	0.06	8.33	.19	.43	831	740.2	45.1	2.6
95.00	10.31	-0.12	0.06	10.25	.09	.35	864	740.1	44.6	3.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39095.20	12.06	-0.09	0.07	12.03	-17.02	-17.28	886	739.9	44.1	3.4
95.40	8.54	-0.05	0.08	8.57	.18	.42	835	739.7	43.6	3.8
95.60	11.09	-0.01	0.08	11.16	.06	.30	872	739.6	43.1	4.2
95.80	13.16	0.01	0.09	13.26	-16.98	.24	900	739.4	42.6	4.6
96.00	13.31	0.05	0.10	13.46	.97	.23	904	739.3	42.1	5.1
96.20	10.58	0.11	0.10	10.78	-17.06	.33	872	739.1	41.6	5.5
96.40	9.29	0.16	0.11	9.56	.12	.38	853	739.0	41.1	5.9
96.60	8.80	0.21	0.11	9.12	.15	.39	844	738.9	40.6	6.3
39096.75	9.15	0.26	0.12	9.53	-17.13	-17.37	849	738.8	40.2	6.6
97.00	8.00	0.34	0.13	8.47	.18	.42	831	738.6	39.6	7.1
97.25	7.37	0.42	0.13	7.92	.21	.44	820	738.5	39.0	7.6
97.50	7.35	0.51	0.14	8.00	.21	.43	820	738.3	38.4	8.2
97.75	7.12	0.61	0.15	7.88	.21	.43	817	738.2	37.8	8.7
98.00	7.20	0.68	0.16	8.04	.20	.43	821	738.0	37.2	9.2
98.25	7.27	0.76	0.17	8.20	.19	.43	824	737.9	36.5	9.7
98.50	7.45	0.85	0.18	8.48	.18	.42	830	737.8	35.9	10.2
98.75	7.83	0.95	0.19	8.96	.15	.40	840	737.7	35.3	10.7
99.00	8.30	1.04	0.20	9.55	.12	.38	851	737.6	34.7	11.2
99.25	7.55	1.10	0.21	8.87	.16	.40	838	737.5	34.1	11.8
99.50	7.01	1.21	0.22	8.43	.18	.41	827	737.4	33.5	12.3
99.75	6.76	1.29	0.23	8.29	.19	.41	824	737.3	32.9	12.8
39100.00	6.42	1.38	0.23	8.02	.20	.42	819	737.2	32.2	13.3
00.25	5.96	1.47	0.24	7.68	.22	.44	812	737.1	31.6	13.8
00.50	5.71	1.58	0.25	7.54	.23	.45	809	737.1	31.0	14.3
00.75	5.57	1.66	0.26	7.49	.23	.45	807	737.0	30.4	14.8
01.00	5.52	1.76	0.27	7.54	.23	.45	808	737.0	29.8	15.3
01.25	5.67	1.84	0.28	7.79	.21	.44	814	736.9	29.2	15.8
01.50	5.82	1.92	0.29	8.03	.20	.43	819	736.9	28.6	16.3
01.75	5.97	2.02	0.30	8.29	.19	.41	824	736.9	27.9	16.9
02.00	5.91	2.10	0.31	8.32	.18	.40	824	736.8	27.3	17.4
02.25	5.85	2.21	0.32	8.38	.18	.39	825	736.8	26.7	17.9
02.50	5.99	2.30	0.33	8.62	.17	.38	829	736.8	26.1	18.4
02.75	6.03	2.39	0.34	8.75	.16	.38	831	736.8	25.5	18.9
03.00	5.86	2.47	0.35	8.68	.17	.39	830	736.8	24.9	19.4
03.25	5.99	2.56	0.36	8.92	.15	.39	835	736.8	24.3	19.9
03.50	5.82	2.65	0.38	8.85	.16	.39	833	736.8	23.6	20.4
03.75	5.95	2.73	0.39	9.07	.15	.38	837	736.9	23.0	20.9
04.00	6.18	2.83	0.40	9.40	.13	.36	842	736.9	22.4	21.4
04.25	6.30	2.93	0.41	9.64	.12	.34	845	736.9	21.8	21.9
04.50	6.12	3.03	0.42	9.56	.12	.34	844	737.0	21.2	22.4
04.75	6.34	3.12	0.44	9.90	.11	.33	849	737.0	20.6	22.9
05.00	6.35	3.18	0.45	9.99	.10	.34	852	737.1	20.0	23.4
05.25	6.57	3.29	0.46	10.32	.09	.33	858	737.1	19.3	23.9
05.50	6.99	3.37	0.47	10.83	.07	.30	863	737.2	18.7	24.4
05.75	6.58	3.48	0.48	10.54	.08	.31	858	737.3	18.1	24.9
06.00	6.59	3.56	0.50	10.65	.08	.30	860	737.4	17.5	25.4
06.25	6.38	3.67	0.51	10.56	.08	.31	859	737.5	16.9	25.9
06.50	6.18	3.76	0.52	10.46	.09	.31	857	737.6	16.3	26.4
06.75	6.07	3.84	0.53	10.44	.09	.31	856	737.7	15.7	26.9
07.00	6.06	3.91	0.55	10.52	.08	.31	857	737.8	15.0	27.4
07.25	5.34	4.00	0.56	9.90	.11	.33	847	737.9	14.4	27.9
07.50	4.50	4.10	0.57	9.17	.14	.36	835	738.0	13.8	28.4
07.75	4.28	4.19	0.58	9.06	.15	.36	832	738.2	13.2	28.9
08.00	3.75	4.28	0.59	8.62	.17	.37	824	738.3	12.6	29.4
08.25	3.63	4.36	0.60	8.59	.17	.36	824	738.4	12.0	29.9
08.50	3.29	4.44	0.61	8.34	.18	.37	819	738.6	11.3	30.4
08.75	3.06	4.54	0.63	8.23	.19	.37	816	738.7	10.7	30.9
09.00	2.72	4.62	0.64	7.99	.20	.39	810	738.9	10.1	31.4
09.25	2.48	4.73	0.65	7.86	.21	.40	807	739.1	9.5	31.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39109.50	2.24	4.81	0.66	7.71	-17.22	-17.40	804	739.2	8.9	32.4
09.75	1.79	4.89	0.67	7.35	.24	.41	795	739.4	8.3	32.9
10.00	1.34	4.96	0.68	6.98	.26	.43	786	739.6	7.6	33.3
10.25	1.08	5.07	0.69	6.84	.27	.44	781	739.8	7.0	33.8
10.50	1.03	5.15	0.70	6.88	.26	.44	782	740.0	6.4	34.3
10.75	0.98	5.24	0.72	6.94	.26	.43	783	740.2	5.8	34.8
11.00	0.92	5.33	0.73	6.98	.26	.43	785	740.4	5.2	35.3
11.25	1.06	5.37	0.74	7.17	.25	.47	790	740.6	4.5	35.8
11.50	1.30	5.47	0.75	7.52	.23	.40	798	740.8	3.9	36.3
11.75	1.23	5.55	0.76	7.54	.23	.40	797	741.0	3.3	36.8
12.00	1.37	5.62	0.77	7.76	.21	.39	802	741.2	2.7	37.3
12.25	1.70	5.70	0.78	8.18	.19	.36	813	741.4	2.0	37.7
12.50	2.24	5.78	0.79	8.81	.16	.34	823	741.7	1.4	38.2
12.75	2.97	5.83	0.80	9.60	.13	.32	837	741.9	0.8	38.7
13.00	4.21	5.90	0.81	10.92	.08	.27	858	742.2	0.2	39.2
13.25	4.74	5.98	0.82	11.54	.05	.24	867	742.4	359.6	39.7
13.50	3.31	6.04	0.83	10.19	.10	.28	847	742.6	358.9	40.2
13.75	1.89	6.11	0.84	8.83	.16	.32	825	742.9	358.3	40.6
14.00	1.79	6.18	0.85	8.82	.16	.32	824	743.2	357.7	41.1
14.25	1.27	6.25	0.86	8.39	.19	.35	812	743.4	357.1	41.6
14.50	1.06	6.31	0.87	8.24	.19	.35	811	743.7	356.4	42.1
14.75	1.17	6.44	0.88	8.50	.17	.32	819	744.0	355.8	42.6
15.00	1.08	6.51	0.89	8.48	.18	.33	815	744.2	355.2	43.0
15.25	1.10	6.56	0.90	8.58	.17	.33	817	744.5	354.5	43.5
15.50	0.51	6.64	0.91	8.06	.20	.34	807	744.8	353.9	44.0
15.75	0.12	6.72	0.91	7.75	.21	.36	799	745.1	353.3	44.5
39116.00	-0.26	6.79	0.92	7.45	-17.23	-17.37	792	745.4	352.6	45.0
16.50	-0.35	6.93	0.93	7.51	.23	.37	790	745.9	351.4	45.9
17.00	-0.46	7.05	0.95	7.55	.23	.38	788	746.5	350.1	46.9
17.50	-0.60	7.17	0.96	7.52	.22	.36	792	747.1	348.8	47.8
18.00	-0.87	7.29	0.97	7.40	.22	.36	792	747.8	347.6	48.8
18.50	-0.92	7.43	0.98	7.49	.22	.35	792	748.4	346.3	49.7
19.00	-0.75	7.54	0.99	7.77	.22	.35	791	749.0	345.0	50.6
19.50	-0.50	7.64	1.00	8.14	.20	.34	798	749.7	343.7	51.6
20.00	0.01	7.75	1.01	8.77	.16	.29	819	750.3	342.4	52.5
20.50	0.64	7.85	1.02	9.51	.13	.26	831	751.0	341.1	53.5
21.00	0.53	7.95	1.02	9.49	.13	.26	828	751.6	339.8	54.4
21.50	-0.01	8.03	1.03	9.05	.15	.27	821	752.3	338.5	55.3
22.00	0.10	8.12	1.04	9.27	.14	.26	825	752.9	337.2	56.3
22.50	0.29	8.20	1.04	9.53	.13	.26	828	753.6	335.9	57.2
23.00	0.21	8.28	1.05	9.54	.13	.25	829	754.3	334.6	58.1
23.50	-0.12	8.33	1.06	9.27	.13	.25	826	755.0	333.2	59.1
24.00	-0.17	8.40	1.06	9.29	.13	.25	826	755.6	331.9	60.0
24.50	-0.57	8.44	1.07	8.94	.15	.26	819	756.3	330.6	60.9
25.00	-0.99	8.50	1.07	8.58	.16	.26	814	757.0	329.2	61.8
25.50	-1.23	8.54	1.08	8.40	.16	.27	811	757.7	327.9	62.7
26.00	-1.36	8.61	1.08	8.33	.17	.27	810	758.3	326.5	63.7
26.50	-1.44	8.62	1.08	8.26	.17	.26	809	759.0	325.1	64.6
39126.75	-1.39	8.63	1.08	8.32	-17.16	-17.26	812	759.3	324.4	65.0
27.00	-1.18	8.64	1.08	8.54	.15	.25	817	759.6	323.7	65.5
27.25	-0.98	8.65	1.08	8.75	.15	.24	816	760.0	323.0	65.9
27.50	-1.08	8.66	1.08	8.66	.15	.25	812	760.3	322.3	66.4
27.75	-0.98	8.67	1.08	8.78	.14	.24	818	760.6	321.6	66.8
28.00	-0.77	8.68	1.08	8.99	.13	.23	822	761.0	320.9	67.3
28.25	-0.77	8.69	1.08	9.01	.13	.23	821	761.3	320.2	67.7
28.50	-0.66	8.69	1.08	9.11	.12	.22	827	761.6	319.5	68.2
28.75	-0.66	8.69	1.08	9.11	.12	.21	830	761.9	318.8	68.6
29.00	-0.86	8.70	1.08	8.92	.13	.22	823	762.2	318.0	69.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39129.25	-1.06	8.69	1.08	8.71	-17.14	-17.23	817	762.6	317.3	69.5
29.50	-0.96	8.69	1.07	8.80	.14	.22	820	762.9	316.6	70.0
29.75	-0.34	8.68	1.07	9.41	.11	.20	834	763.2	315.9	70.4
30.00	0.68	8.67	1.07	10.42	.07	.16	852	763.5	315.1	70.9
30.25	-0.75	8.66	1.07	8.98	.14	.22	818	763.8	314.4	71.3
30.50	-0.95	8.65	1.06	8.76	.14	.22	819	764.1	313.6	71.8
30.75	-1.05	8.64	1.06	8.65	.14	.22	818	764.4	312.9	72.2
39131.00	-1.02	8.63	1.06	8.67	-17.14	-17.22	818	764.7	312.1	72.7
31.50	-1.10	8.61	1.05	8.56	.14	.23	815	765.3	310.6	73.6
32.00	-1.05	8.54	1.05	8.55	.14	.22	814	765.9	309.1	74.4
32.50	-0.95	8.50	1.04	8.59	.14	.22	814	766.5	307.5	75.3
33.00	-0.83	8.44	1.03	8.64	.14	.22	813	767.1	305.9	76.2
33.50	-0.68	8.39	1.02	8.72	.14	.21	814	767.6	304.3	77.1
34.00	-0.42	8.30	1.01	8.90	.13	.20	821	768.2	302.7	77.9
34.50	-0.36	8.21	1.00	8.85	.13	.20	821	768.7	301.0	78.8
35.00	-0.46	8.12	0.98	8.65	.14	.21	815	769.2	299.4	79.6
35.50	-0.46	8.05	0.97	8.56	.14	.21	811	769.7	297.6	80.5
36.00	-0.47	7.95	0.95	8.43	.15	.22	809	770.2	295.9	81.3
36.50	-0.40	7.84	0.93	8.37	.15	.22	809	770.7	294.1	82.2
37.00	-0.28	7.71	0.92	8.35	.15	.21	809	771.2	292.2	83.0
37.50	-0.13	7.58	0.90	8.35	.15	.21	810	771.6	290.3	83.8
38.00	0.03	7.47	0.88	8.39	.14	.21	811	772.1	288.4	84.6
38.50	0.20	7.35	0.86	8.41	.14	.20	812	772.5	286.4	85.4
39.00	0.40	7.18	0.84	8.42	.14	.20	813	772.9	284.3	86.2
39.50	0.68	7.03	0.82	8.53	.13	.19	816	773.3	282.2	87.0
40.00	0.98	6.87	0.80	8.66	.12	.19	820	773.7	280.0	87.8
40.50	1.24	6.72	0.77	8.73	.12	.18	822	774.0	277.7	88.6
41.00	1.43	6.53	0.75	8.71	.12	.18	823	774.4	275.3	89.3
41.50	1.54	6.34	0.72	8.60	.12	.18	821	774.7	272.8	90.1
42.00	1.78	6.17	0.69	8.64	.12	.18	823	775.0	270.2	90.8
42.50	2.02	5.96	0.67	8.65	.12	.18	823	775.3	267.4	91.5
43.00	2.19	5.77	0.64	8.60	.12	.18	822	775.6	264.6	92.2
43.50	2.35	5.57	0.61	8.53	.13	.18	820	775.9	261.5	92.8
44.00	2.51	5.34	0.59	8.44	.13	.19	817	776.1	258.3	93.5
44.50	2.75	5.13	0.56	8.44	.13	.19	818	776.3	254.9	94.1
45.00	3.03	4.89	0.53	8.45	.13	.19	818	776.5	251.3	94.7
45.50	3.65	4.65	0.51	8.80	.12	.17	826	776.7	247.4	95.3
46.00	4.23	4.41	0.48	9.13	.10	.16	831	776.9	243.3	95.8
46.50	4.15	4.19	0.45	8.79	.12	.18	822	777.0	238.9	96.2
47.00	4.59	3.97	0.43	9.00	.11	.17	828	777.1	234.3	96.7
47.50	4.78	3.73	0.40	8.91	.12	.17	825	777.2	229.3	97.0
48.00	5.08	3.50	0.37	8.95	.11	.17	827	777.3	224.1	97.3
48.50	4.74	3.25	0.34	8.33	.14	.20	814	777.4	218.6	97.6
49.00	4.63	2.98	0.31	7.92	.16	.21	804	777.4	212.9	97.7
49.50	4.75	2.74	0.29	7.79	.17	.22	800	777.4	207.0	97.8
50.00	4.82	2.51	0.26	7.59	.18	.23	794	777.4	200.9	97.8
50.50	4.88	2.29	0.23	7.40	.19	.24	790	777.4	194.8	97.7
51.00	4.98	2.07	0.20	7.25	.20	.25	787	777.3	188.7	97.5
51.50	5.07	1.81	0.17	7.05	.21	.26	780	777.2	182.7	97.2
52.00	5.17	1.56	0.14	6.87	.22	.28	772	777.1	176.9	96.8
52.50	5.23	1.33	0.11	6.68	.23	.28	771	777.0	171.3	96.4
53.00	5.13	1.08	0.08	6.29	.26	.31	760	776.9	165.9	95.9
53.50	5.04	0.86	0.05	5.95	.28	.33	747	776.7	160.9	95.3
54.00	5.24	0.64	0.02	5.90	.29	.34	742	776.5	156.1	94.7
54.50	5.61	0.45	-0.01	6.05	.28	.33	747	776.3	151.6	94.0
55.00	5.62	0.24	-0.04	5.82	.29	.35	742	776.0	147.4	93.2
39155.25	5.55	0.15	-0.06	5.63	-17.31	-17.36	736	775.9	145.4	92.8
55.50	5.74	0.05	-0.07	5.72	.30	.36	740	775.8	143.4	92.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39155.75	5.72	-0.03	-0.09	5.60	-17.31	-17.37	734	775.6	141.5	92.0
56.00	5.80	-0.13	-0.10	5.58	.31	.37	733	775.5	139.7	91.6
56.25	5.88	-0.21	-0.12	5.55	.31	.37	734	775.3	137.9	91.2
56.50	5.95	-0.30	-0.13	5.52	.31	.37	733	775.1	136.2	90.8
56.75	6.13	-0.39	-0.15	5.59	.31	.37	736	775.0	134.5	90.3
57.00	6.09	-0.45	-0.16	5.48	.32	.38	731	774.8	132.9	89.9
57.25	6.25	-0.54	-0.17	5.55	.31	.37	734	774.6	131.3	89.4
57.50	6.31	-0.61	-0.18	5.53	.32	.38	733	774.4	129.8	89.0
57.75	6.27	-0.67	-0.20	5.40	.33	.39	729	774.2	120.3	88.5
58.00	6.43	-0.74	-0.21	5.48	.32	.38	733	774.0	126.9	88.0
58.25	6.48	-0.81	-0.23	5.44	.32	.38	732	773.8	125.4	87.6
58.50	6.42	-0.85	-0.24	5.33	.33	.39	727	773.6	124.1	87.1
58.75	6.57	-0.91	-0.25	5.41	.33	.39	730	773.4	122.7	86.6
59.00	6.82	-0.95	-0.27	5.60	.31	.37	738	773.2	121.4	86.1
59.25	6.86	-1.00	-0.28	5.58	.31	.38	738	773.0	120.1	85.6
59.50	7.00	-1.04	-0.29	5.67	.31	.37	741	772.7	118.9	85.1
59.75	6.94	-1.07	-0.31	5.56	.32	.38	731	772.5	117.7	84.6
60.00	7.08	-1.12	-0.32	5.63	.32	.39	729	772.2	116.5	84.1
60.25	7.11	-1.15	-0.34	5.63	.32	.39	729	772.0	115.3	83.6
60.50	7.15	-1.17	-0.35	5.63	.32	.39	732	771.7	114.2	83.1
60.75	7.49	-1.19	-0.36	5.94	.29	.36	747	771.5	113.1	82.6
61.00	7.73	-1.20	-0.37	6.16	.28	.35	754	771.2	112.0	82.1
61.25	8.17	-1.22	-0.38	6.57	.25	.33	767	770.9	110.9	81.6
61.50	8.61	-1.24	-0.39	6.98	.23	.30	782	770.6	109.8	81.1
61.75	8.74	-1.24	-0.41	7.09	.22	.30	787	770.4	108.8	80.6
62.00	8.57	-1.23	-0.42	6.92	.23	.31	780	770.1	107.8	80.0
62.25	8.39	-1.22	-0.43	6.74	.24	.32	775	769.8	106.8	79.5
62.50	7.81	-1.19	-0.44	6.18	.28	.36	757	769.5	105.8	79.0
62.75	7.74	-1.18	-0.46	6.10	.28	.36	759	769.2	104.8	78.5
63.00	7.67	-1.16	-0.47	6.04	.28	.36	758	768.8	103.8	77.9
63.25	7.50	-1.14	-0.48	5.88	.30	.37	751	768.5	102.9	77.4
63.50	7.53	-1.08	-0.49	5.96	.29	.37	755	768.2	102.0	76.9
63.75	7.26	-1.05	-0.50	5.70	.31	.39	747	767.9	101.1	76.3
64.00	7.09	-1.00	-0.51	5.58	.32	.40	742	767.5	100.1	75.8
64.25	7.02	-0.95	-0.53	5.54	.32	.40	740	767.2	99.3	75.3
64.50	6.85	-0.89	-0.54	5.42	.33	.41	738	766.9	98.4	74.7
64.75	6.79	-0.84	-0.55	5.40	.33	.42	733	766.5	97.5	74.2
65.00	7.04	-0.78	-0.56	5.70	.31	.40	744	766.2	96.6	73.6
65.25	7.08	-0.73	-0.57	5.78	.30	.39	750	765.8	95.8	73.1
65.50	7.12	-0.68	-0.59	5.85	.30	.38	755	765.5	94.9	72.6
65.75	7.38	-0.64	-0.60	6.14	.28	.36	767	765.1	94.1	72.0
66.00	7.63	-0.63	-0.61	6.39	.26	.35	776	764.7	93.3	71.5
66.25	7.79	-0.63	-0.62	6.54	.25	.34	779	764.4	92.5	70.9
66.50	7.74	-0.63	-0.63	6.48	.26	.35	775	764.0	91.7	70.4
66.75	7.90	-0.64	-0.64	6.62	.25	.34	779	763.6	90.9	69.8
67.00	8.06	-0.66	-0.65	6.75	.24	.34	782	763.2	90.1	69.3
67.25	8.33	-0.70	-0.65	6.98	.23	.33	788	762.8	89.3	68.7
67.50	8.60	-0.75	-0.66	7.20	.22	.32	795	762.4	88.5	68.2
67.75	8.78	-0.82	-0.67	7.29	.21	.32	797	762.0	87.7	67.6
68.00	9.06	-0.86	-0.68	7.52	.20	.31	803	761.6	87.0	67.1
68.25	9.24	-0.98	-0.69	7.57	.20	.31	805	761.2	86.2	66.5
68.50	9.22	-1.06	-0.70	7.46	.20	.31	804	760.8	85.5	66.0
68.75	9.00	-1.17	-0.71	7.13	.21	.32	800	760.4	84.7	65.4
69.00	8.89	-1.26	-0.71	6.92	.22	.33	797	760.0	84.0	64.9
69.25	8.89	-1.37	-0.72	6.80	.24	.34	788	759.6	83.3	64.3
69.50	8.89	-1.48	-0.73	6.67	.25	.36	781	759.2	82.5	63.7
69.75	8.89	-1.63	-0.73	6.53	.25	.37	778	758.8	81.8	63.2
70.00	9.10	-1.76	-0.74	6.61	.25	.36	782	758.4	81.1	62.6
70.25	9.53	-1.88	-0.75	6.90	.23	.34	795	758.0	80.4	62.1
70.50	9.75	-2.00	-0.75	7.01	.22	.33	799	757.5	79.7	61.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39170.75	9.88	-2.11	-0.76	7.01	-17.22	-17.34	797	757.1	78.9	61.0
71.00	9.71	-2.23	-0.76	6.72	.24	.36	788	756.7	78.2	60.4
71.25	9.64	-2.36	-0.77	6.51	.25	.37	783	756.3	77.5	59.8
71.50	9.18	-2.49	-0.78	5.90	.29	.41	761	755.9	76.9	59.3
71.75	9.23	-2.62	-0.78	5.83	.30	.42	756	755.4	76.2	58.7
72.00	9.79	-2.73	-0.79	6.27	.27	.40	769	755.0	75.5	58.1
72.25	11.70	-2.84	-0.79	8.07	.16	.30	822	754.6	74.8	57.6
72.50	11.76	-2.95	-0.79	8.02	.17	.30	821	754.1	74.1	57.0
72.75	11.33	-3.06	-0.80	7.47	.19	.32	809	753.7	73.4	56.5
73.00	10.80	-3.17	-0.80	6.83	.23	.36	792	753.3	72.8	55.9
73.25	10.59	-3.29	-0.81	6.49	.25	.38	781	752.9	72.1	55.3
73.50	10.58	-3.39	-0.81	6.38	.26	.39	778	752.4	71.4	54.8
73.75	10.99	-3.52	-0.81	6.66	.24	.38	785	752.0	70.8	54.2
74.00	11.41	-3.64	-0.82	6.96	.22	.37	793	751.6	70.1	53.6
74.25	12.25	-3.73	-0.82	7.70	.18	.33	814	751.1	69.4	53.1
74.50	12.38	-3.82	-0.82	7.75	.18	.32	816	750.7	68.8	52.5
74.75	12.52	-3.92	-0.82	7.78	.17	.32	818	750.3	68.1	51.9
75.00	12.77	-4.00	-0.83	7.93	.16	.30	823	749.9	67.5	51.4
75.25	12.82	-4.10	-0.83	7.89	.16	.31	821	749.4	66.8	50.8
75.50	12.88	-4.19	-0.83	7.86	.17	.33	818	749.0	66.2	50.2
75.75	13.36	-4.28	-0.83	8.25	.15	.32	827	748.6	65.6	49.7
76.00	16.83	-4.36	-0.83	11.64	.00	.18	889	748.2	64.9	49.1
76.25	16.49	-4.44	-0.83	11.22	.01	.20	883	747.7	64.3	48.6
76.50	15.21	-4.50	-0.83	9.88	.07	.26	861	747.3	63.6	48.0
76.75	15.25	-4.55	-0.83	9.87	.07	.26	861	746.9	63.0	47.4
77.00	15.28	-4.62	-0.83	9.82	.07	.25	859	746.5	62.4	46.9
77.25	15.09	-4.69	-0.83	9.58	.08	.25	856	746.1	61.8	46.3
77.50	14.90	-4.73	-0.82	9.35	.09	.26	851	745.7	61.1	45.7
77.75	14.69	-4.79	-0.82	9.08	.10	.28	846	745.3	60.5	45.1
78.00	14.27	-4.83	-0.82	8.61	.12	.29	837	744.9	59.9	44.6
78.25	13.74	-4.90	-0.82	8.02	.15	.33	824	744.5	59.3	44.0
78.50	13.81	-4.94	-0.81	8.06	.15	.33	825	744.1	58.6	43.4
78.75	14.79	-4.96	-0.81	9.02	.10	.30	846	743.7	58.0	42.9
79.00	16.78	-5.01	-0.80	10.97	.01	.23	882	743.3	57.4	42.3
79.25	18.87	-5.04	-0.80	13.03	-16.93	.16	909	742.9	56.8	41.7
79.50	19.62	-5.07	-0.79	13.77	.90	.14	919	742.5	56.2	41.2
79.75	19.45	-5.09	-0.78	13.58	.91	.14	917	742.1	55.6	40.6
80.00	17.83	-5.12	-0.78	11.94	.97	.20	895	741.7	55.0	40.0
80.25	15.70	-5.13	-0.77	9.80	-17.05	.28	864	741.3	54.3	39.4
80.50	15.10	-5.14	-0.77	9.19	.08	.31	853	741.0	53.7	38.9
80.75	14.69	-5.14	-0.76	8.79	.10	.33	844	740.6	53.1	38.3
81.00	16.11	-5.14	-0.76	10.21	.03	.26	869	740.2	52.5	37.7
81.25	16.81	-5.14	-0.76	10.91	.00	.24	880	739.9	51.9	37.2
81.50	16.38	-5.14	-0.75	10.49	.02	.25	872	739.5	51.3	36.6
81.75	16.66	-5.14	-0.74	10.78	.01	.23	875	739.2	50.7	36.0
82.00	15.61	-5.13	-0.74	9.74	.05	.28	859	738.8	50.1	35.4
82.25	14.24	-5.11	-0.73	8.40	.12	.33	833	738.5	49.5	34.9
82.50	13.59	-5.08	-0.72	7.79	.15	.36	819	738.1	48.9	34.3
82.75	14.25	-5.07	-0.72	8.47	.11	.32	834	737.8	48.3	33.7
83.00	14.61	-5.04	-0.71	8.86	.09	.30	842	737.4	47.7	33.2
83.25	14.66	-5.02	-0.70	8.93	.08	.31	843	737.1	47.1	32.6
83.50	14.80	-4.97	-0.69	9.14	.07	.30	848	736.8	46.5	32.0
83.75	14.63	-4.95	-0.68	9.00	.08	.31	845	736.5	45.9	31.4
84.00	14.57	-4.92	-0.67	8.98	.08	.30	845	736.2	45.4	30.9
84.25	14.39	-4.87	-0.66	8.87	.08	.31	842	735.8	44.8	30.3
84.50	14.32	-4.83	-0.65	8.83	.08	.31	842	735.5	44.2	29.7
84.75	14.34	-4.78	-0.64	8.92	.08	.31	843	735.2	43.6	29.1
85.00	14.37	-4.73	-0.63	9.01	.07	.30	845	734.9	43.0	28.6
85.25	14.39	-4.70	-0.62	9.07	.07	.30	846	734.7	42.4	28.0
85.50	14.30	-4.63	-0.61	9.06	.07	.31	847	734.4	41.8	27.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39185.75	14.22	-4.59	-0.59	9.03	-17.07	-17.31	846	734.1	41.2	26.9
86.00	14.23	-4.54	-0.58	9.11	.06	.31	847	733.8	40.7	26.3
86.25	14.35	-4.50	-0.57	9.28	.06	.30	849	733.6	40.1	25.7
86.50	14.46	-4.42	-0.56	9.48	.05	.28	852	733.3	39.5	25.1
86.75	14.06	-4.37	-0.54	9.15	.06	.30	847	733.0	38.9	24.6
87.00	13.87	-4.31	-0.53	9.03	.07	.31	845	732.8	38.3	24.0
87.25	14.09	-4.24	-0.52	9.33	.05	.30	850	732.5	37.7	23.4
87.50	14.20	-4.18	-0.51	9.51	.04	.30	854	732.3	37.2	22.8
87.75	14.21	-4.10	-0.50	9.61	.03	.30	856	732.1	36.6	22.3
88.00	14.73	-4.03	-0.49	10.22	.00	.27	865	731.9	36.0	21.7
88.25	15.36	-3.96	-0.47	10.93	-16.97	.25	876	731.6	35.4	21.1
88.50	15.37	-3.89	-0.46	11.02	.97	.24	876	731.4	34.8	20.5
88.75	15.08	-3.80	-0.45	10.83	.98	.24	872	731.2	34.3	20.0
89.00	14.69	-3.72	-0.44	10.53	.99	.26	868	731.0	33.7	19.4
89.25	14.40	-3.65	-0.43	10.32	-17.00	.27	866	730.8	33.1	18.8
89.50	14.22	-3.57	-0.41	10.23	.00	.27	863	730.6	32.5	18.2
89.75	14.04	-3.48	-0.40	10.16	.01	.26	861	730.5	32.0	17.7
90.00	13.86	-3.38	-0.39	10.08	.01	.27	860	730.3	31.4	17.1
90.25	13.78	-3.29	-0.37	10.12	.01	.27	860	730.1	30.8	16.5
90.50	13.71	-3.22	-0.36	10.14	.01	.27	860	730.0	30.2	15.9
90.75	13.44	-3.13	-0.35	9.96	.01	.28	857	729.8	29.7	15.4
91.00	13.07	-3.04	-0.33	9.71	.02	.29	853	729.7	29.1	14.8
91.25	13.01	-2.94	-0.32	9.75	.02	.29	854	729.5	28.5	14.2
91.50	12.96	-2.85	-0.31	9.80	.02	.28	854	729.4	27.9	13.6
91.75	12.70	-2.75	-0.29	9.66	.03	.28	852	729.3	27.4	13.0
92.00	12.55	-2.66	-0.28	9.62	.03	.28	851	729.1	26.8	12.5
92.25	12.21	-2.56	-0.27	9.37	.04	.30	846	729.0	26.2	11.9
92.50	12.07	-2.48	-0.25	9.34	.04	.31	847	728.9	25.7	11.3
92.75	11.94	-2.39	-0.23	9.32	.04	.31	846	728.8	25.1	10.7
93.00	11.71	-2.29	-0.22	9.20	.04	.31	843	728.7	24.5	10.2
93.25	11.48	-2.19	-0.20	9.10	.05	.31	841	728.7	23.9	9.6
93.50	11.37	-2.09	-0.19	9.09	.05	.31	841	728.6	23.4	9.0
93.75	11.47	-1.98	-0.17	9.32	.04	.30	845	728.5	22.8	8.4
94.00	11.77	-1.88	-0.16	9.73	.02	.29	853	728.5	22.2	7.9
94.25	13.21	-1.78	-0.14	11.29	-16.94	.24	878	728.4	21.7	7.3
94.50	12.92	-1.67	-0.12	11.13	.95	.25	876	728.4	21.1	6.7
94.75	12.53	-1.57	-0.10	10.87	.96	.25	871	728.3	20.5	6.1
95.00	12.36	-1.46	-0.09	10.81	.97	.25	870	728.3	20.0	5.5
95.25	12.30	-1.36	-0.07	10.87	.96	.25	871	728.3	19.4	5.0
95.50	12.04	-1.25	-0.06	10.73	.97	.25	867	728.3	18.8	4.4
95.75	11.79	-1.15	-0.04	10.60	.98	.25	864	728.3	18.3	3.8
96.00	11.34	-1.04	-0.02	10.28	.99	.27	860	728.3	17.7	3.2
96.25	10.90	-0.94	0.00	9.97	-17.00	.29	857	728.3	17.1	2.7
96.50	10.68	-0.83	0.01	9.86	.01	.29	854	728.3	16.5	2.1
96.75	11.03	-0.73	0.03	10.34	-16.99	.27	861	728.4	16.0	1.5
97.00	11.50	-0.62	0.04	10.92	.96	.24	868	728.4	15.4	0.9
97.25	12.37	-0.50	0.06	11.93	.93	.20	881	728.4	14.8	0.4
97.50	13.23	-0.40	0.08	12.91	.89	.17	892	728.5	14.3	-0.2
39197.80	15.58	-0.27	0.10	15.40	-16.82	-17.09	918	728.6	13.6	-0.9
98.00	16.87	-0.19	0.11	16.79	.77	.07	933	728.6	13.1	-1.4
98.20	21.67	-0.09	0.12	21.69	.64	-16.97	975	728.7	12.7	-1.8
98.40	24.38	0.00	0.13	24.51	.57	.91	998	728.8	12.2	-2.3
98.60	25.98	0.08	0.15	26.21	.54	.88	1007	728.8	11.8	-2.8
98.80	20.71	0.17	0.16	21.04	.65	.98	972	728.9	11.3	-3.2
99.00	15.91	0.25	0.17	16.33	.78	-17.09	931	729.0	10.9	-3.7
39199.25	14.08	0.36	0.19	14.63	-16.83	-17.12	911	729.1	10.3	-4.3
99.50	13.64	0.47	0.21	14.32	.85	.13	907	729.2	9.7	-4.9
99.75	12.89	0.58	0.22	13.69	.87	.15	900	729.4	9.1	-5.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39200.00	11.82	0.68	0.24	12.74	-16.90	-17.18	890	729.5	8.6	-6.0
00.25	11.56	0.80	0.25	12.61	.90	.19	890	729.7	8.0	-6.6
00.50	11.40	0.90	0.26	12.56	.90	.19	889	729.8	7.4	-7.2
00.75	11.23	1.02	0.28	12.52	.91	.18	887	730.0	6.9	-7.8
01.00	10.84	1.12	0.30	12.27	.91	.19	884	730.2	6.3	-8.3
01.25	10.96	1.24	0.32	12.52	.91	.19	887	730.3	5.7	-8.9
01.50	11.18	1.35	0.33	12.85	.90	.17	891	730.5	5.2	-9.5
01.75	11.69	1.45	0.35	13.49	.87	.15	898	730.7	4.6	-10.1
02.00	11.89	1.57	0.37	13.83	.86	.15	904	730.9	4.0	-10.6
02.25	11.68	1.67	0.38	13.73	.86	.16	905	731.2	3.4	-11.2
02.50	11.25	1.78	0.40	13.43	.87	.16	900	731.4	2.9	-11.8
02.75	11.02	1.88	0.41	13.31	.88	.16	897	731.6	2.3	-12.4
03.00	11.20	1.98	0.43	13.60	.87	.15	901	731.9	1.7	-13.0
03.25	11.67	2.08	0.44	14.19	.84	.14	909	732.1	1.1	-13.5
03.50	13.16	2.19	0.46	15.81	.79	.10	928	732.4	0.6	-14.1
03.75	12.81	2.28	0.48	15.57	.79	.10	927	732.6	360.0	-14.7
04.00	14.59	2.39	0.49	17.47	.74	.05	945	732.9	359.4	-15.3
04.25	16.37	2.48	0.51	19.36	.69	.01	960	733.2	358.8	-15.9
04.50	13.96	2.57	0.53	17.06	.76	.06	939	733.5	358.3	-16.4
04.75	11.95	2.68	0.54	15.17	.82	.11	920	733.8	357.7	-17.0
05.00	11.57	2.79	0.56	14.91	.82	.12	918	734.1	357.1	-17.6
05.25	11.28	2.89	0.57	14.74	.83	.12	916	734.4	356.5	-18.2
05.50	10.89	2.98	0.59	14.47	.84	.13	912	734.7	356.0	-18.8
05.75	10.50	3.09	0.60	14.19	.86	.13	907	735.0	355.4	-19.3
06.00	10.10	3.20	0.62	13.91	.86	.14	905	735.4	354.8	-19.9
06.25	9.59	3.30	0.63	13.52	.87	.16	903	735.7	354.2	-20.5
06.50	8.98	3.38	0.64	13.01	.89	.17	897	736.1	353.6	-21.1
06.75	8.47	3.49	0.66	12.62	.91	.18	890	736.4	353.1	-21.6
07.00	7.95	3.57	0.67	12.19	.93	.20	885	736.8	352.5	-22.2
07.25	9.26	3.68	0.68	13.62	.87	.15	903	737.2	351.9	-22.8
39207.40	10.66	3.73	0.69	15.08	-16.83	-17.11	919	737.4	351.6	-23.2
07.60	13.67	3.79	0.70	18.16	.74	.03	949	737.7	351.1	-23.6
07.80	16.36	3.88	0.71	20.95	.67	-16.96	973	738.0	350.6	-24.1
08.00	22.08	3.95	0.72	26.75	.56	.85	1008	738.3	350.1	-24.5
08.20	13.29	4.03	0.73	18.04	.76	-17.03	943	738.6	349.7	-25.0
08.40	10.39	4.10	0.74	15.23	.85	.09	911	739.0	349.2	-25.5
39208.75	7.19	4.23	0.76	12.17	-16.95	-17.17	875	739.5	348.4	-26.3
09.00	5.93	4.32	0.77	11.02	-17.00	.21	860	739.9	347.8	-26.9
09.25	5.48	4.41	0.78	10.68	.01	.23	855	740.4	347.2	-27.4
09.50	4.12	4.51	0.79	9.42	.06	.29	835	740.8	346.6	-28.0
09.75	3.26	4.59	0.81	8.66	.10	.33	821	741.2	346.0	-28.6
10.00	4.14	4.70	0.82	9.66	.05	.29	841	741.7	345.4	-29.2
10.25	5.42	4.77	0.83	11.02	.00	.22	860	742.1	344.8	-29.7
10.50	6.09	4.86	0.84	11.78	-16.97	.19	870	742.6	344.2	-30.3
10.75	5.63	4.95	0.85	11.43	.98	.21	867	743.0	343.7	-30.9
11.00	5.58	5.03	0.86	11.48	.98	.21	867	743.5	343.1	-31.5
11.25	3.08	5.11	0.87	9.06	-17.09	.30	825	743.9	342.5	-32.1
11.50	1.80	5.18	0.89	7.88	.15	.36	797	744.4	341.9	-32.6
11.75	2.47	5.27	0.90	8.63	.12	.32	813	744.9	341.3	-33.2
12.00	3.23	5.35	0.91	9.49	.08	.27	830	745.4	340.7	-33.8
12.25	3.79	5.43	0.92	10.14	.05	.24	841	745.9	340.1	-34.4
12.50	4.55	5.50	0.93	10.97	.02	.21	855	746.3	339.4	-34.9
12.75	5.51	5.58	0.94	12.03	-16.97	.18	871	746.8	338.8	-35.5
13.00	8.31	5.65	0.95	14.92	.88	.09	908	747.3	338.2	-36.1
13.25	4.69	5.72	0.96	11.36	-17.00	.21	863	747.8	337.6	-36.7
13.50	3.61	5.79	0.97	10.37	.04	.23	845	748.3	337.0	-37.3
13.75	3.25	5.86	0.97	10.08	.06	.23	840	748.8	336.4	-37.8
14.00	2.99	5.91	0.98	9.87	.07	.23	838	749.3	335.8	-38.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39214.25	2.73	5.98	0.99	9.70	-17.08	-17.24	833	749.8	335.2	-39.0
14.50	2.37	6.06	1.00	9.43	.09	.25	828	750.4	334.6	-39.6
14.75	1.80	6.12	1.01	8.93	.11	.28	818	750.9	333.9	-40.1
15.00	1.55	6.19	1.01	8.75	.12	.28	814	751.4	333.3	-40.7
15.25	1.19	6.24	1.02	8.45	.14	.30	808	751.9	332.7	-41.3
15.50	1.04	6.31	1.03	8.37	.14	.30	806	752.4	332.1	-41.9
15.75	0.99	6.38	1.03	8.40	.14	.29	807	752.9	331.4	-42.4
16.00	0.84	6.42	1.04	8.30	.15	.29	805	753.5	330.8	-43.0
16.25	0.89	6.50	1.05	8.44	.14	.28	809	754.0	330.2	-43.6
16.50	0.65	6.53	1.05	8.22	.15	.30	802	754.5	329.5	-44.2
39216.80	1.33	6.60	1.06	8.99	-17.12	-17.28	820	755.2	328.8	-44.9
17.00	3.21	6.64	1.06	10.91	.03	.20	857	755.6	328.3	-45.3
17.20	5.73	6.69	1.07	13.49	-16.94	.11	893	756.0	327.8	-45.8
17.40	3.30	6.72	1.07	11.09	-17.02	.19	860	756.4	327.2	-46.3
17.60	1.68	6.75	1.08	9.50	.09	.25	829	756.9	326.7	-46.7
39217.75	0.80	6.79	1.08	8.67	-17.14	-17.28	811	757.2	326.3	-47.1
18.00	0.35	6.83	1.09	8.27	.16	.29	802	757.7	325.7	-47.6
18.25	-0.19	6.86	1.09	7.76	.18	.32	788	758.2	325.0	-48.2
18.50	-0.43	6.92	1.10	7.58	.20	.33	783	758.8	324.4	-48.8
18.75	-0.47	6.94	1.11	7.58	.20	.32	783	759.3	323.7	-49.4
19.00	-0.30	6.98	1.11	7.79	.18	.31	788	759.8	323.1	-49.9
19.25	0.08	7.02	1.11	8.21	.16	.30	798	760.4	322.4	-50.5
19.50	-0.16	7.04	1.12	8.00	.17	.30	792	760.9	321.7	-51.1
19.75	-0.40	7.07	1.12	7.80	.18	.30	788	761.4	321.0	-51.7
20.00	-0.32	7.13	1.12	7.92	.18	.30	791	761.9	320.4	-52.2
20.25	-0.25	7.15	1.13	8.03	.17	.29	794	762.5	319.7	-52.8
20.50	-0.38	7.16	1.13	7.91	.18	.29	790	763.0	319.0	-53.4
20.75	-0.51	7.18	1.13	7.80	.18	.29	789	763.5	318.3	-54.0
21.00	-0.23	7.22	1.13	8.12	.17	.27	797	764.0	317.6	-54.5
21.25	-0.15	7.23	1.13	8.21	.17	.28	797	764.5	316.9	-55.1
21.50	-0.17	7.24	1.13	8.20	.17	.27	796	765.1	316.2	-55.7
21.75	0.01	7.25	1.13	8.39	.16	.26	802	765.6	315.5	-56.2
22.00	0.40	7.26	1.13	8.79	.14	.24	812	766.1	314.8	-56.8
22.25	1.09	7.29	1.13	9.52	.10	.21	826	766.6	314.1	-57.4
22.50	0.26	7.31	1.13	8.70	.14	.25	808	767.1	313.4	-57.9
22.75	-0.17	7.33	1.18	8.34	.16	.25	804	767.6	312.7	-58.5
23.00	0.94	7.33	1.13	9.40	.10	.19	829	768.1	311.9	-59.1
23.25	1.34	7.33	1.12	9.78	.09	.18	833	768.6	311.2	-59.6
23.50	0.71	7.34	1.12	9.17	.12	.21	819	769.1	310.5	-60.2
23.75	0.09	7.34	1.12	8.55	.15	.24	806	769.6	309.7	-60.8
24.00	0.18	7.34	1.12	8.64	.14	.23	808	770.1	309.0	-61.3
24.25	0.17	7.33	1.11	8.61	.15	.23	807	770.6	308.2	-61.9
39224.50	0.07	7.33	1.11	8.50	-17.15	-17.23	806	771.1	307.4	-62.5
25.00	0.01	7.30	1.10	8.41	.15	.23	806	772.0	305.9	-63.6
25.50	-0.07	7.26	1.09	8.28	.16	.23	804	773.0	304.3	-64.7
26.00	-0.16	7.24	1.08	8.16	.16	.23	801	773.9	302.7	-65.8
26.50	-0.28	7.18	1.07	7.97	.17	.23	798	774.8	301.0	-67.0
27.00	-0.46	7.15	1.06	7.74	.18	.24	793	775.7	299.3	-68.1
27.50	-0.54	7.08	1.05	7.60	.19	.25	788	776.6	297.6	-69.2
28.00	-0.12	7.02	1.03	7.93	.17	.23	796	777.5	295.8	-70.3
28.50	1.28	6.94	1.02	9.23	.11	.17	826	778.3	294.0	-71.4
29.00	1.99	6.85	1.00	9.85	.08	.14	837	779.1	292.1	-72.5
29.50	1.24	6.76	0.99	8.98	.12	.17	819	779.9	290.1	-73.5
30.00	0.74	6.66	0.97	8.38	.15	.20	805	780.7	288.1	-74.6
30.50	0.62	6.55	0.95	8.11	.16	.20	801	781.5	286.0	-75.7
31.00	0.27	6.42	0.93	7.62	.18	.22	790	782.2	283.8	-76.7
31.50	0.26	6.30	0.91	7.47	.19	.23	786	782.9	281.5	-77.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39232.00	0.52	6.16	0.89	7.57	-17.18	-17.22	788	783.6	279.1	-78.8
32.50	0.63	6.00	0.87	7.51	.19	.22	785	784.3	276.6	-79.8
33.00	0.71	5.85	0.84	7.40	.19	.23	780	785.0	274.0	-80.9
33.50	0.69	5.69	0.82	7.19	.20	.24	775	785.6	271.2	-81.8
34.00	0.70	5.55	0.80	7.05	.21	.24	772	786.2	268.3	-82.8
34.50	0.94	5.36	0.77	7.07	.21	.24	772	786.8	265.2	-83.8
35.00	1.15	5.18	0.75	7.08	.21	.24	773	787.3	261.9	-84.7
35.50	1.63	5.02	0.72	7.38	.19	.22	780	787.8	258.4	-85.6
36.00	1.85	4.83	0.69	7.37	.19	.22	777	788.3	254.7	-86.4
36.50	2.07	4.63	0.67	7.38	.19	.22	779	788.8	250.7	-87.3
37.00	2.33	4.44	0.64	7.41	.19	.21	778	789.3	246.4	-88.0
37.50	2.86	4.24	0.61	7.71	.17	.20	783	789.7	241.9	-88.8
38.00	3.81	4.05	0.58	8.44	.13	.16	806	790.1	237.0	-89.5
38.50	3.60	3.84	0.55	7.98	.16	.18	794	790.4	231.9	-90.1
39.00	3.55	3.63	0.52	7.69	.17	.19	785	790.8	226.5	-90.6
39.50	3.77	3.41	0.49	7.66	.17	.19	786	791.1	220.8	-91.1
40.00	4.05	3.20	0.46	7.71	.17	.19	788	791.3	214.9	-91.5
40.50	4.32	2.97	0.43	7.73	.17	.19	790	791.6	208.8	-91.8
39241.00	4.48	2.76	0.40	7.65	-17.17	-17.19	788	791.8	202.7	-92.0
41.25	4.69	2.66	0.38	7.73	.16	.18	790	791.8	199.6	-92.0
41.50	4.79	2.55	0.37	7.71	.16	.18	790	791.9	196.5	-92.1
41.75	4.78	2.45	0.35	7.58	.17	.19	785	792.0	193.5	-92.1
42.00	4.96	2.35	0.34	7.66	.17	.19	787	792.1	190.5	-92.1
42.25	5.14	2.25	0.32	7.71	.16	.18	789	792.1	187.5	-92.1
42.50	5.21	2.17	0.31	7.69	.16	.18	790	792.2	184.6	-92.1
42.75	4.97	2.06	0.29	7.32	.19	.20	779	792.2	181.7	-92.0
43.00	5.03	1.98	0.28	7.28	.19	.21	777	792.2	178.9	-91.9
43.25	5.08	1.87	0.25	7.21	.19	.21	772	792.3	176.1	-91.8
43.50	5.33	1.78	0.25	7.35	.19	.21	775	792.3	173.4	-91.7
43.75	5.57	1.68	0.23	7.48	.18	.20	780	792.3	170.8	-91.6
44.00	5.70	1.59	0.22	7.51	.18	.19	782	792.3	168.2	-91.4
44.25	5.93	1.48	0.20	7.62	.17	.19	785	792.3	165.8	-91.2
44.50	6.26	1.39	0.19	7.84	.16	.18	791	792.3	163.4	-91.0
44.75	6.38	1.30	0.17	7.86	.16	.18	792	792.2	161.1	-90.8
45.00	6.60	1.21	0.15	7.96	.15	.17	794	792.2	158.8	-90.6
45.25	7.12	1.10	0.14	8.36	.13	.15	804	792.2	156.6	-90.4
45.50	7.63	1.03	0.12	8.78	.11	.13	816	792.1	154.5	-90.2
45.75	7.73	0.94	0.11	8.77	.11	.13	815	792.0	152.5	-89.9
46.00	7.83	0.83	0.09	8.75	.11	.13	813	792.0	150.5	-89.7
46.25	7.82	0.74	0.08	8.63	.12	.14	810	791.9	148.6	-89.4
46.50	7.70	0.64	0.06	8.40	.13	.15	804	791.8	146.8	-89.1
46.75	7.78	0.56	0.05	8.39	.13	.15	806	791.7	145.0	-88.8
47.00	7.87	0.47	0.03	8.37	.13	.15	807	791.6	143.2	-88.5
47.25	7.84	0.39	0.02	8.25	.14	.16	802	791.5	141.6	-88.2
47.50	8.02	0.32	0.00	8.33	.13	.16	802	791.3	139.9	-87.9
47.75	8.09	0.23	-0.01	8.31	.14	.16	801	791.2	138.4	-87.6
48.00	8.36	0.15	-0.03	8.48	.13	.15	805	791.1	136.8	-87.3
48.25	8.13	0.08	-0.04	8.17	.14	.16	798	790.9	135.3	-87.0
48.50	8.09	0.00	-0.05	8.04	.14	.17	799	790.8	133.9	-86.6
48.75	8.05	-0.04	-0.07	7.94	.15	.17	797	790.6	132.5	-86.3
49.00	8.41	-0.11	-0.09	8.22	.14	.16	804	790.4	131.1	-86.0
49.25	9.09	-0.19	-0.10	8.80	.11	.14	816	790.2	129.7	-85.6
49.50	8.94	-0.23	-0.11	8.60	.12	.15	808	790.1	128.4	-85.3
49.75	8.99	-0.32	-0.13	8.55	.12	.15	809	789.9	127.2	-84.9
50.00	8.74	-0.37	-0.14	8.23	.14	.16	801	789.6	125.9	-84.6
50.25	8.80	-0.43	-0.16	8.21	.14	.16	801	789.4	124.7	-84.2
50.50	8.75	-0.50	-0.17	8.07	.14	.17	799	789.2	123.5	-83.8
50.75	8.70	-0.56	-0.19	7.95	.15	.18	797	789.0	122.3	-83.5
51.00	8.54	-0.63	-0.20	7.71	.16	.19	788	788.7	121.2	-83.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39251.25	8.49	-0.69	-0.21	7.59	-17.17	-17.20	782	788.5	120.1	-82.7
51.50	8.85	-0.75	-0.23	7.87	.16	.19	790	788.2	119.0	-82.3
51.75	8.60	-0.81	-0.24	7.55	.17	.20	784	787.9	117.9	-82.0
52.00	8.44	-0.86	-0.26	7.32	.18	.21	779	787.7	116.9	-81.6
52.25	8.70	-0.92	-0.27	7.50	.17	.20	785	787.4	115.8	-81.2
52.50	8.65	-0.97	-0.29	7.39	.18	.21	782	787.1	114.8	-80.8
52.75	8.81	-1.03	-0.30	7.48	.17	.20	786	786.8	113.8	-80.4
53.00	8.76	-1.07	-0.31	7.38	.18	.21	782	786.5	112.8	-80.0
53.25	8.71	-1.14	-0.33	7.25	.19	.22	777	786.2	111.9	-79.6
53.50	8.77	-1.19	-0.34	7.24	.19	.22	779	785.8	110.9	-79.3
53.75	8.93	-1.25	-0.36	7.32	.18	.22	779	785.5	110.0	-78.9
54.00	9.19	-1.29	-0.37	7.53	.18	.21	783	785.2	109.0	-78.5
54.25	9.56	-1.37	-0.39	7.81	.16	.19	794	784.8	108.1	-78.1
54.50	10.04	-1.41	-0.40	8.23	.14	.17	806	784.5	107.2	-77.7
54.75	9.49	-1.47	-0.42	7.60	.17	.21	789	784.1	106.3	-77.3
55.00	9.25	-1.54	-0.43	7.28	.18	.22	782	783.8	105.5	-76.9
55.25	9.12	-1.61	-0.45	7.06	.20	.23	776	783.4	104.6	-76.4
55.50	8.79	-1.67	-0.46	6.66	.22	.26	762	783.0	103.7	-76.0
55.75	8.87	-1.73	-0.48	6.65	.22	.26	761	782.6	102.9	-75.6
56.00	8.95	-1.80	-0.50	6.65	.22	.26	762	782.3	102.1	-75.2
56.25	9.34	-1.87	-0.51	6.96	.20	.25	774	781.9	101.2	-74.8
56.50	9.63	-1.91	-0.52	7.20	.19	.23	781	781.5	100.4	-74.4
56.75	10.44	-2.00	-0.54	7.90	.15	.20	800	781.1	99.6	-74.0
57.00	10.74	-2.07	-0.55	8.12	.15	.20	801	780.6	98.8	-73.6
57.25	10.94	-2.13	-0.57	8.24	.14	.19	806	780.2	98.0	-73.2
57.50	10.64	-2.21	-0.58	7.85	.16	.21	798	779.8	97.2	-72.8
57.75	10.54	-2.28	-0.60	7.66	.16	.22	794	779.4	96.4	-72.3
58.00	10.76	-2.34	-0.61	7.81	.16	.21	798	779.0	95.6	-71.9
58.25	10.88	-2.43	-0.63	7.82	.16	.22	796	778.5	94.9	-71.5
58.50	11.11	-2.52	-0.64	7.94	.15	.21	800	778.1	94.1	-71.1
58.75	11.24	-2.61	-0.65	7.98	.15	.21	802	777.6	93.3	-70.7
59.00	11.27	-2.69	-0.66	7.92	.15	.21	804	777.2	92.6	-70.2
59.25	11.41	-2.77	-0.68	7.95	.15	.20	808	776.7	91.8	-69.8
59.50	11.56	-2.85	-0.69	8.02	.14	.20	811	776.3	91.1	-69.4
59.75	11.61	-2.94	-0.71	7.95	.14	.20	810	775.8	90.4	-69.0
60.00	11.77	-3.04	-0.72	8.01	.14	.20	812	775.4	89.6	-68.6
60.25	11.83	-3.14	-0.73	7.96	.14	.21	810	774.9	88.9	-68.1
60.50	12.00	-3.23	-0.74	8.03	.14	.20	813	774.4	88.2	-67.7
60.75	12.08	-3.31	-0.76	8.01	.14	.21	812	774.0	87.5	-67.3
61.00	12.37	-3.38	-0.77	8.21	.13	.20	818	773.5	86.8	-66.9
61.25	12.56	-3.48	-0.78	8.30	.13	.20	820	773.0	86.0	-66.4
61.50	12.96	-3.56	-0.80	8.60	.11	.18	829	772.5	85.3	-66.0
61.75	13.68	-3.66	-0.81	9.21	.08	.16	843	772.0	84.6	-65.6
62.00	14.61	-3.73	-0.82	10.06	.05	.13	859	771.6	83.9	-65.1
62.25	14.53	-3.82	-0.83	9.88	.06	.15	855	771.1	83.2	-64.7
62.50	14.46	-3.90	-0.84	9.72	.07	.15	852	770.6	82.6	-64.3
62.75	14.39	-3.99	-0.86	9.54	.07	.16	850	770.1	81.9	-63.9
63.00	15.76	-4.09	-0.87	10.80	.02	.10	877	769.6	81.2	-63.4
63.25	16.53	-4.18	-0.88	11.46	-16.99	.08	888	769.1	80.5	-63.0
63.50	15.47	-4.26	-0.89	10.32	-17.04	.13	868	768.6	79.8	-62.6
63.75	14.62	-4.34	-0.90	9.38	.08	.17	850	768.1	79.1	-62.1
64.00	14.91	-4.41	-0.91	9.58	.07	.16	856	767.6	78.5	-61.7
64.25	15.10	-4.51	-0.92	9.67	.06	.16	858	767.1	77.8	-61.3
64.50	15.09	-4.58	-0.93	9.58	.07	.16	857	766.6	77.1	-60.8
64.75	15.31	-4.66	-0.94	9.71	.06	.15	861	766.1	76.5	-60.4
65.00	15.43	-4.73	-0.95	9.75	.06	.16	861	765.6	75.8	-60.0
65.25	15.96	-4.82	-0.96	10.18	.04	.14	869	765.1	75.1	-59.5
65.50	16.61	-4.90	-0.97	10.74	.02	.13	880	764.6	74.5	-59.1
65.75	17.27	-4.96	-0.98	11.33	.00	.11	890	764.1	73.8	-58.7
66.00	18.47	-5.04	-0.99	12.43	-16.96	.08	908	763.6	73.2	-58.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_B$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39266.25	17.16	-5.11	-1.00	11.05	-17.01	-17.13	886	763.1	72.5	-57.8
66.50	17.17	-5.16	-1.00	11.01	.01	.13	886	762.6	71.9	-57.3
66.75	17.06	-5.23	-1.01	10.82	.02	.14	884	762.2	71.2	-56.9
67.00	17.05	-5.29	-1.02	10.74	.02	.14	883	761.7	70.6	-56.5
67.25	16.82	-5.36	-1.03	10.43	.03	.16	878	761.2	69.9	-56.0
67.50	17.19	-5.42	-1.04	10.72	.02	.15	884	760.7	69.3	-55.6
67.75	17.34	-5.47	-1.04	10.84	.01	.15	887	760.2	68.7	-55.2
68.00	17.38	-5.54	-1.05	10.79	.01	.16	888	759.7	68.0	-54.7
68.25	17.41	-5.57	-1.06	10.78	.01	.15	888	759.2	67.4	-54.3
68.50	17.44	-5.62	-1.06	10.75	.01	.15	888	758.7	66.7	-53.8
68.75	17.04	-5.68	-1.07	10.29	.03	.17	880	758.2	66.1	-53.4
69.00	16.93	-5.71	-1.08	10.15	.04	.18	878	757.7	65.5	-53.0
69.25	17.23	-5.76	-1.08	10.39	.03	.17	883	757.3	64.8	-52.5
69.50	17.31	-5.79	-1.09	10.43	.02	.17	884	756.8	64.2	-52.1
69.75	17.59	-5.82	-1.09	10.67	.01	.16	889	756.3	63.6	-51.6
70.00	17.55	-5.88	-1.10	10.57	.02	.17	888	755.8	63.0	-51.2
70.25	17.60	-5.90	-1.11	10.59	.02	.17	889	755.4	62.3	-50.8
70.50	18.25	-5.93	-1.11	11.21	-16.99	.15	900	754.9	61.7	-50.3
70.75	18.59	-5.97	-1.12	11.50	.98	.14	905	754.4	61.1	-49.9
71.00	19.12	-5.99	-1.12	12.01	.96	.13	914	754.0	60.5	-49.4
71.25	20.87	-6.00	-1.13	13.74	.90	.07	938	753.5	59.8	-49.0
39271.40	22.31	-6.01	-1.13	15.17	-16.85	-17.04	956	753.2	59.5	-48.7
71.60	32.11	-6.03	-1.13	24.95	.63	-16.82	1042	752.9	59.0	-48.4
71.80	36.97	-6.05	-1.14	29.77	.53	.74	1077	752.5	58.5	-48.0
72.00	35.76	-6.07	-1.14	28.55	.55	.76	1072	752.1	58.0	-47.7
72.20	27.86	-6.09	-1.14	20.63	.70	.91	1016	751.8	57.5	-47.3
72.40	22.82	-6.10	-1.15	15.58	.84	-17.03	963	751.4	57.0	-46.9
39272.75	21.89	-6.10	-1.15	14.64	-16.87	-17.05	950	750.8	56.1	-46.3
73.00	19.60	-6.10	-1.16	12.34	.94	.12	922	750.4	55.5	-45.9
73.25	18.42	-6.10	-1.16	11.16	.99	.17	906	750.0	54.9	-45.4
73.50	18.25	-6.10	-1.16	11.00	.99	.18	904	749.5	54.3	-45.0
73.75	17.57	-6.10	-1.16	10.31	-17.02	.21	894	749.1	53.7	-44.5
74.00	18.20	-6.10	-1.16	10.95	-16.99	.19	905	748.7	53.1	-44.1
74.25	18.42	-6.10	-1.17	11.16	.98	.18	909	748.3	52.4	-43.6
74.50	18.74	-6.10	-1.17	11.47	.97	.16	913	747.9	51.8	-43.2
74.75	18.23	-6.10	-1.17	10.96	.99	.19	906	747.4	51.2	-42.7
75.00	18.01	-6.09	-1.17	10.76	-17.00	.20	904	747.0	50.6	-42.3
75.25	17.69	-6.07	-1.17	10.45	.01	.21	900	746.6	50.0	-41.9
75.50	17.37	-6.05	-1.18	10.13	.02	.23	895	746.3	49.4	-41.4
75.75	18.66	-6.02	-1.18	11.46	-16.97	.18	917	745.9	48.8	-41.0
76.00	20.26	-6.00	-1.18	13.08	.91	.13	940	745.5	48.2	-40.5
76.25	25.62	-5.99	-1.18	18.45	.75	-16.98	996	745.1	47.6	-40.1
39276.40	25.66	-5.98	-1.18	18.50	-16.75	-16.98	999	744.9	47.2	-39.8
76.60	26.25	-5.96	-1.18	19.11	.73	.97	1006	744.6	46.7	-39.4
76.80	29.23	-5.92	-1.18	22.13	.66	.91	1029	744.3	46.2	-39.1
77.00	33.16	-5.90	-1.18	26.09	.58	.84	1057	744.0	45.8	-38.7
77.20	28.97	-5.89	-1.18	21.90	.66	.91	1031	743.7	45.3	-38.3
77.40	23.97	-5.85	-1.18	16.94	.78	-17.03	987	743.4	44.8	-38.0
77.60	22.16	-5.82	-1.18	15.16	.84	.07	966	743.2	44.3	-37.6
39277.75	21.57	-5.81	-1.18	14.57	-16.86	-17.09	958	743.0	43.9	-37.3
78.00	21.18	-5.78	-1.17	14.22	.87	.09	954	742.6	43.3	-36.9
78.25	19.76	-5.75	-1.17	12.84	.92	.14	939	742.3	42.7	-36.4
78.50	20.07	-5.71	-1.17	13.19	.90	.14	945	742.0	42.1	-36.0
78.75	20.99	-5.66	-1.17	14.15	.86	.11	959	741.6	41.5	-35.5
79.00	21.09	-5.64	-1.16	14.28	.86	.11	961	741.3	40.9	-35.1
79.25	19.75	-5.58	-1.16	13.01	.90	.15	945	741.0	40.3	-34.6

Tablé 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39279.50	19.23	-5.55	-1.16	12.52	-16.92	-17.16	938	740.7	39.7	-34.2
79.75	19.82	-5.50	-1.16	13.16	.90	.15	947	740.4	39.1	-33.7
80.00	20.41	-5.45	-1.16	13.79	.87	.13	956	740.1	38.5	-33.3
80.25	19.26	-5.39	-1.15	12.71	.91	.17	944	739.8	37.9	-32.8
80.50	18.81	-5.35	-1.15	12.31	.93	.18	937	739.5	37.3	-32.4
80.75	18.67	-5.29	-1.14	12.25	.93	.18	936	739.3	36.7	-31.9
81.00	18.63	-5.24	-1.14	12.25	.93	.18	937	739.0	36.1	-31.4
81.25	18.79	-5.18	-1.13	12.48	.92	.18	942	738.7	35.5	-31.0
81.50	18.74	-5.14	-1.13	12.47	.92	.18	943	738.5	34.9	-30.5
81.75	18.79	-5.07	-1.12	12.60	.92	.18	944	738.2	34.3	-30.1
82.00	18.63	-5.02	-1.11	12.50	.92	.18	942	738.0	33.7	-29.6
82.25	18.47	-4.95	-1.11	12.41	.92	.18	942	737.8	33.1	-29.2
82.50	18.20	-4.90	-1.10	12.20	.93	.19	940	737.5	32.5	-28.7
82.75	18.03	-4.83	-1.09	12.10	.94	.20	939	737.3	31.9	-28.2
83.00	18.16	-4.76	-1.09	12.31	.93	.19	942	737.1	31.3	-27.8
83.25	18.09	-4.71	-1.08	12.30	.93	.20	943	736.9	30.7	-27.3
83.50	18.62	-4.63	-1.07	12.92	.90	.18	952	736.7	30.1	-26.9
83.75	19.15	-4.57	-1.07	13.51	.88	.16	960	736.5	29.5	-26.4
84.00	18.36	-4.51	-1.06	12.79	.90	.18	952	736.3	28.9	-26.0
84.25	17.66	-4.42	-1.05	12.19	.93	.21	943	736.1	28.3	-25.5
84.50	17.27	-4.36	-1.04	11.87	.94	.22	939	735.9	27.7	-25.0
84.75	16.97	-4.30	-1.03	11.65	.95	.23	936	735.8	27.1	-24.6
85.00	16.47	-4.21	-1.03	11.23	.97	.24	930	735.6	26.5	-24.1
85.25	16.28	-4.15	-1.02	11.11	.98	.24	928	735.5	25.9	-23.6
85.50	15.98	-4.08	-1.01	10.89	.99	.26	926	735.3	25.3	-23.2
85.75	15.37	-3.99	0.00	11.38	.97	.24	934	735.2	24.7	-22.7
86.00	14.97	-3.91	-0.99	10.07	-17.02	.30	917	735.0	24.1	-22.3
86.25	14.46	-3.86	-0.99	9.61	.04	.32	910	734.9	23.5	-21.8
86.50	13.24	-3.77	-0.98	8.48	.10	.37	892	734.8	22.9	-21.3
86.75	14.05	-3.68	-0.97	9.40	.05	.33	907	734.7	22.3	-20.9
87.00	14.15	-3.59	-0.96	9.60	.04	.32	910	734.6	21.8	-20.4
87.25	14.25	-3.53	-0.95	9.77	.04	.31	913	734.5	21.2	-19.9
87.50	14.25	-3.45	-0.94	9.86	.03	.31	915	734.4	20.6	-19.5
87.75	14.44	-3.36	-0.94	10.14	.02	.30	919	734.3	20.0	-19.0
88.00	14.44	-3.27	-0.93	10.24	.02	.30	922	734.2	19.4	-18.6
88.25	14.94	-3.18	-0.92	10.84	-16.99	.28	932	734.2	18.8	-18.1
88.50	15.04	-3.12	-0.91	11.01	.98	.27	935	734.1	18.2	-17.6
88.75	15.34	-3.04	-0.90	11.40	.96	.26	941	734.0	17.6	-17.2
89.00	15.23	-2.94	-0.89	11.40	.96	.26	941	734.0	17.0	-16.7
89.25	14.81	-2.87	-0.88	11.07	.98	.27	936	733.9	16.4	-16.2
89.50	14.40	-2.79	-0.88	10.74	.99	.29	932	733.9	15.8	-15.8
89.75	14.26	-2.70	-0.86	10.70	-17.00	.29	932	733.9	15.2	-15.3
90.00	14.14	-2.62	-0.85	10.68	.00	.29	931	733.9	14.6	-14.8
90.25	14.13	-2.52	-0.84	10.76	.00	.29	933	733.8	14.0	-14.4
90.50	14.22	-2.44	-0.83	10.95	-16.99	.28	936	733.8	13.3	-13.9
90.75	14.10	-2.36	-0.82	10.92	.99	.28	935	733.8	12.7	-13.4
91.00	13.99	-2.28	-0.81	10.90	-17.00	.29	935	733.8	12.1	-13.0
91.25	13.78	-2.20	-0.80	10.78	.00	.29	934	733.8	11.5	-12.5
91.50	13.77	-2.10	-0.79	10.88	.00	.29	936	733.9	10.9	-12.0
91.75	13.77	-2.02	-0.78	10.97	.00	.29	937	733.9	10.3	-11.5
92.00	13.97	-1.92	-0.77	11.27	-16.98	.28	943	733.9	9.7	-11.1
92.25	14.17	-1.85	-0.75	11.57	.96	.27	950	734.0	9.1	-10.6
92.50	13.25	-1.76	-0.74	10.76	-17.00	.30	937	734.0	8.5	-10.1
92.75	12.95	-1.67	-0.73	10.55	.02	.31	933	734.1	7.9	-9.7
93.00	12.75	-1.58	-0.72	10.45	.02	.31	933	734.1	7.3	-9.2
93.25	12.45	-1.48	-0.71	10.25	.03	.32	931	734.2	6.7	-8.7
93.50	12.45	-1.40	-0.69	10.36	.03	.32	931	734.2	6.1	-8.3
93.75	12.36	-1.31	-0.68	10.36	.03	.32	931	734.3	5.5	-7.8
94.00	12.36	-1.23	-0.67	10.46	.02	.32	934	734.4	4.9	-7.3
94.25	12.07	-1.15	-0.66	10.26	.03	.33	933	734.5	4.3	-6.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39294.50	11.87	-1.05	-0.64	10.18	-17.04	-17.33	931	734.6	3.7	-6.4
94.75	11.68	-0.96	-0.62	10.10	.05	.33	929	734.7	3.1	-5.9
95.00	11.28	-0.86	-0.61	9.81	.06	.35	926	734.8	2.5	-5.4
95.25	11.09	-0.78	-0.59	9.72	.06	.35	925	734.9	1.8	-4.9
95.50	11.00	-0.68	-0.58	9.74	.07	.35	925	735.0	1.2	-4.5
95.75	11.01	-0.60	-0.57	9.84	.06	.35	929	735.1	0.6	-4.0
96.00	12.45	-0.51	-0.56	11.38	-16.99	.29	951	735.3	0.0	-3.5
96.25	11.95	-0.42	-0.54	10.99	-17.01	.30	946	735.4	359.4	-3.0
96.50	11.56	-0.33	-0.52	10.71	.02	.31	942	735.5	358.8	-2.6
96.75	11.68	-0.24	-0.51	10.92	.01	.31	945	735.7	358.2	-2.1
97.00	11.28	-0.18	-0.50	10.60	.03	.32	941	735.8	357.6	-1.6
97.25	9.57	-0.07	-0.48	9.01	.10	.39	919	736.0	356.9	-1.1
97.50	8.15	0.01	-0.46	7.70	.17	.46	897	736.1	356.3	-0.7
97.75	7.96	0.11	-0.45	7.62	.18	.46	895	736.3	355.7	-0.2
98.00	8.49	0.19	-0.44	8.24	.15	.43	905	736.5	355.1	0.3
98.25	8.70	0.27	-0.43	8.55	.14	.41	910	736.6	354.5	0.8
98.50	8.62	0.34	-0.41	8.54	.14	.41	910	736.8	353.9	1.2
98.75	8.53	0.43	-0.40	8.56	.14	.41	910	737.0	353.2	1.7
99.00	8.34	0.53	-0.38	8.48	.15	.42	910	737.2	352.6	2.2
99.25	8.15	0.62	-0.37	8.40	.15	.42	910	737.4	352.0	2.7
99.50	8.26	0.71	-0.36	8.61	.13	.41	915	737.6	351.4	3.2
99.75	10.51	0.80	-0.34	10.97	.02	.31	951	737.8	350.7	3.6
39300.00	12.76	0.87	-0.33	13.30	-16.93	.23	981	738.0	350.1	4.1
00.25	14.20	0.96	-0.32	14.83	.89	.18	993	738.2	349.5	4.6
00.50	11.97	1.04	-0.30	12.71	.97	.25	969	738.4	348.9	5.1
00.75	10.85	1.14	-0.29	11.70	-17.00	.28	960	738.6	348.2	5.6
01.00	13.92	1.23	-0.28	14.87	-16.88	.18	998	738.9	347.6	6.0
01.25	13.92	1.29	-0.26	14.95	.87	.17	1002	739.1	347.0	6.5
01.50	12.70	1.38	-0.25	13.83	.91	.21	990	739.3	346.3	7.0
01.75	12.71	1.46	-0.23	13.94	.92	.21	989	739.5	345.7	7.5
02.00	11.69	1.54	-0.22	13.02	.95	.24	980	739.8	345.1	8.0
02.25	10.06	1.61	-0.21	11.46	-17.01	.29	961	740.0	344.4	8.4
02.50	9.15	1.69	-0.19	10.65	.06	.32	949	740.3	343.8	8.9
02.75	9.55	1.78	-0.18	11.15	.03	.30	957	740.5	343.2	9.4
03.00	9.45	1.86	-0.17	11.14	.03	.31	959	740.8	342.5	9.9
03.25	7.91	1.92	-0.15	9.69	.10	.36	938	741.0	341.9	10.4
03.50	7.60	2.00	-0.14	9.46	.12	.37	934	741.3	341.2	10.9
03.75	7.29	2.08	-0.13	9.24	.12	.38	932	741.5	340.6	11.4
04.00	7.18	2.15	-0.12	9.21	.12	.39	932	741.8	340.0	11.8
04.25	7.37	2.22	-0.10	9.48	.12	.37	936	742.0	339.3	12.3
04.50	7.66	2.30	-0.09	9.87	.10	.35	941	742.3	338.7	12.8
04.75	7.64	2.39	-0.07	9.96	.10	.35	942	742.6	338.0	13.3
05.00	7.73	2.45	-0.06	10.11	.09	.35	946	742.8	337.4	13.8
05.25	7.60	2.52	-0.05	10.08	.09	.35	947	743.1	336.7	14.3
05.50	7.48	2.61	-0.04	10.05	.10	.35	945	743.4	336.1	14.7
05.75	7.25	2.66	-0.03	9.88	.11	.35	943	743.7	335.4	15.2
06.00	7.43	2.74	-0.02	10.15	.09	.34	949	743.9	334.7	15.7
06.25	7.40	2.82	-0.01	10.20	.09	.34	950	744.2	334.1	16.2
06.50	7.16	2.87	0.00	10.03	.10	.35	948	744.5	333.4	16.7
06.75	7.23	2.94	0.01	10.18	.10	.34	949	744.8	332.7	17.2
07.00	6.98	3.02	0.02	10.02	.11	.35	948	745.1	332.1	17.7
07.25	7.05	3.07	0.03	10.14	.10	.34	951	745.4	331.4	18.2
07.50	7.00	3.14	0.04	10.18	.10	.34	951	745.7	330.7	18.6
07.75	6.75	3.18	0.05	9.99	.11	.35	949	745.9	330.1	19.1
08.00	6.19	3.26	0.06	9.51	.13	.37	943	746.2	329.4	19.6
08.25	5.33	3.33	0.07	8.73	.17	.40	931	746.5	328.7	20.1
08.50	4.76	3.37	0.08	8.22	.20	.42	923	746.8	328.0	20.6
08.75	4.40	3.45	0.09	7.93	.22	.44	919	747.1	327.3	21.1
09.00	4.54	3.48	0.10	8.12	.21	.43	923	747.4	326.6	21.6
09.25	4.68	3.55	0.11	8.34	.19	.42	928	747.7	325.9	22.1

Tablè 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39309.50	4.40	3.59	0.12	8.12	-17.21	-17.43	924	748.0	325.2	22.6
09.75	4.13	3.66	0.13	7.92	.22	.44	921	748.3	324.5	23.0
10.00	3.95	3.70	0.14	7.79	.23	.44	919	748.6	323.8	23.5
10.25	3.77	3.76	0.15	7.68	.24	.45	918	748.9	323.1	24.0
10.50	3.69	3.80	0.16	7.65	.24	.45	918	749.2	322.4	24.5
10.75	4.82	3.86	0.17	8.85	.17	.39	939	749.4	321.7	25.0
11.00	6.05	3.90	0.18	10.13	.10	.33	961	749.7	321.0	25.5
11.25	5.14	3.95	0.18	9.28	.14	.37	949	750.0	320.3	26.0
11.50	4.33	3.99	0.19	8.52	.19	.41	936	750.3	319.6	26.5
11.75	3.62	4.04	0.20	7.86	.23	.44	925	750.6	318.8	27.0
12.00	3.11	4.08	0.21	7.39	.25	.46	917	750.9	318.1	27.4
12.25	2.59	4.10	0.22	6.91	.28	.49	908	751.2	317.4	27.9
12.50	2.57	4.13	0.22	6.92	.28	.49	909	751.5	316.6	28.4
12.75	2.56	4.18	0.23	6.97	.28	.49	910	751.8	315.9	28.9
13.00	2.53	4.20	0.24	6.98	.28	.49	911	752.1	315.1	29.4
13.25	2.51	4.21	0.25	6.97	.28	.49	912	752.4	314.4	29.9
13.50	2.27	4.24	0.26	6.77	.30	.50	908	752.6	313.6	30.4
13.75	2.18	4.26	0.26	6.72	.30	.50	907	752.9	312.8	30.9
14.00	2.22	4.30	0.27	6.79	.30	.49	909	753.2	312.1	31.4
14.25	2.37	4.31	0.28	6.96	.28	.49	914	753.5	311.3	31.8
14.50	2.42	4.32	0.29	7.03	.26	.48	920	753.8	310.5	32.3
14.75	4.51	4.34	0.29	9.15	.15	.37	956	754.0	309.7	32.8
15.00	9.05	4.37	0.30	13.73	-16.97	.19	1011	754.3	308.9	33.3
15.25	12.48	4.38	0.31	17.17	.86	.08	1047	754.6	308.1	33.8
15.50	10.51	4.39	0.31	15.22	.91	.13	1033	754.9	307.3	34.3
15.75	7.12	4.40	0.32	11.85	-17.03	.25	996	755.1	306.5	34.8
16.00	4.15	4.40	0.33	8.88	.16	.37	954	755.4	305.6	35.3
16.25	4.43	4.40	0.33	9.16	.15	.36	959	755.7	304.8	35.7
16.50	6.55	4.40	0.34	11.30	.05	.26	990	755.9	304.0	36.2
16.75	5.42	4.39	0.35	10.16	.10	.31	975	756.2	303.1	36.7
17.00	3.58	4.37	0.36	8.31	.20	.40	945	756.5	302.2	37.2
17.25	2.56	4.34	0.36	7.26	.26	.46	927	756.7	301.4	37.7
17.50	2.66	4.32	0.37	7.35	.26	.45	928	757.0	300.5	38.2
17.75	2.97	4.30	0.37	7.63	.25	.43	933	757.2	299.6	38.6
18.00	3.28	4.26	0.38	7.91	.23	.41	938	757.5	298.7	39.1
18.25	3.80	4.23	0.39	8.41	.19	.39	949	757.7	297.8	39.6
18.50	6.46	4.18	0.39	11.03	.07	.27	988	758.0	296.8	40.1
18.75	6.99	4.13	0.40	11.52	.06	.25	993	758.2	295.9	40.6
19.00	2.63	4.09	0.41	7.13	.27	.45	927	758.4	294.9	41.0
19.25	1.63	4.04	0.41	6.08	.35	.52	905	758.7	294.0	41.5
19.50	1.66	3.98	0.42	6.06	.35	.51	905	758.9	293.0	42.0
19.75	1.69	3.92	0.42	6.03	.35	.51	906	759.1	292.0	42.5
20.00	1.62	3.86	0.42	5.90	.36	.52	903	759.3	291.0	42.9
20.25	1.66	3.75	0.43	5.84	.37	.52	902	759.6	289.9	43.4
20.50	1.90	3.66	0.43	5.99	.36	.51	906	759.8	288.9	43.9
20.75	2.05	3.53	0.44	6.02	.35	.51	907	760.0	287.8	44.4
21.00	2.20	3.38	0.44	6.02	.35	.51	908	760.2	286.7	44.8
21.25	2.35	3.25	0.45	6.05	.35	.50	910	760.4	285.6	45.3
21.50	2.40	3.09	0.45	5.94	.36	.51	909	760.6	284.5	45.8
21.75	2.66	2.90	0.45	6.01	.35	.50	909	760.8	283.3	46.2
22.00	3.63	2.72	0.45	6.80	.29	.46	926	761.0	282.1	46.7
22.25	4.30	2.49	0.46	7.25	.26	.43	935	761.2	280.9	47.1
22.50	4.47	2.23	0.46	7.15	.27	.43	934	761.3	279.7	47.6
22.75	5.04	1.95	0.46	7.45	.26	.41	941	761.5	278.4	48.0
23.00	5.41	1.63	0.46	7.50	.25	.41	942	761.7	277.1	48.5
23.25	5.58	1.22	0.46	7.26	.26	.42	938	761.9	275.8	48.9
23.50	5.65	0.73	0.46	6.84	.28	.45	931	762.0	274.5	49.4
23.75	5.93	0.00	0.46	6.39	.32	.48	921	762.2	273.1	49.8
24.00	6.31	0.00	0.46	6.77	.29	.45	929	762.4	271.7	50.2
24.25	6.09	0.00	0.46	6.55	.31	.46	925	762.5	270.2	50.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39324.50	5.86	0.00	0.46	6.32	-17.33	-17.47	921	762.7	268.7	51.1
24.75	5.64	0.00	0.46	6.10	.34	.49	916	762.8	267.1	51.5
25.00	5.31	0.00	0.46	5.77	.36	.51	909	762.9	265.6	51.9
25.25	5.30	0.00	0.46	5.76	.37	.51	910	763.1	263.9	52.3
25.50	5.28	0.00	0.46	5.74	.37	.51	909	763.2	262.2	52.7
25.75	5.58	0.00	0.46	6.04	.34	.49	916	763.3	260.5	53.1
26.00	5.67	0.00	0.46	6.13	.34	.48	919	763.4	258.7	53.5
26.25	5.56	0.00	0.46	6.02	.34	.49	917	763.5	256.9	53.9
26.50	5.65	0.00	0.46	6.11	.34	.48	919	763.6	255.0	54.3
26.75	5.54	0.00	0.46	6.00	.34	.49	917	763.8	253.0	54.6
27.00	5.33	0.00	0.46	5.79	.36	.50	912	763.8	251.0	55.0
27.25	5.94	0.00	0.46	6.40	.31	.46	926	763.9	248.9	55.3
27.50	6.45	0.00	0.45	6.90	.27	.43	937	764.0	246.7	55.7
27.75	6.65	0.00	0.45	7.10	.26	.42	941	764.1	244.5	56.0
28.00	7.06	0.00	0.45	7.51	.24	.39	949	764.2	242.2	56.3
28.25	7.26	0.00	0.44	7.70	.23	.38	953	764.3	239.9	56.6
28.50	7.16	0.00	0.44	7.60	.24	.38	951	764.3	237.4	56.9
28.75	7.27	0.00	0.44	7.71	.23	.37	954	764.4	234.9	57.2
29.00	6.96	0.00	0.43	7.39	.25	.39	948	764.4	232.4	57.4
29.25	6.97	0.00	0.43	7.40	.25	.39	948	764.5	229.7	57.7
29.50	6.97	0.00	0.42	7.39	.25	.39	948	764.5	227.0	57.9
29.75	7.08	0.00	0.42	7.50	.24	.39	950	764.6	224.3	58.1
30.00	7.19	0.00	0.42	7.61	.23	.38	952	764.6	221.5	58.3
30.25	7.00	0.00	0.41	7.41	.24	.39	949	764.6	218.6	58.4
30.50	6.70	0.00	0.40	7.10	.26	.41	943	764.6	215.7	58.6
30.75	6.50	0.00	0.40	6.90	.27	.42	939	764.6	212.8	58.7
31.00	6.51	0.00	0.40	6.91	.27	.42	940	764.7	209.8	58.8
31.25	6.52	0.00	0.39	6.91	.27	.42	940	764.7	206.8	58.9
31.50	6.43	0.00	0.38	6.81	.28	.42	938	764.7	203.8	59.0
31.75	6.44	0.00	0.38	6.82	.27	.42	938	764.6	200.8	59.0
32.00	6.65	0.00	0.37	7.02	.26	.41	942	764.6	197.8	59.1
32.25	7.07	0.00	0.37	7.44	.23	.39	951	764.6	194.8	59.1
32.50	7.28	0.00	0.36	7.64	.22	.37	955	764.6	191.9	59.0
32.75	7.49	0.00	0.36	7.85	.21	.36	959	764.6	188.9	59.0
33.00	8.11	0.00	0.35	8.46	.17	.33	969	764.5	186.0	59.0
33.25	9.34	0.00	0.34	9.68	.11	.27	988	764.5	183.2	58.9
33.50	10.78	0.00	0.34	11.12	.05	.21	1007	764.4	180.4	58.8
33.75	10.58	0.00	0.33	10.91	.05	.22	1007	764.4	177.7	58.7
34.00	10.49	0.00	0.32	10.81	.06	.22	1004	764.3	175.1	58.6
34.25	10.39	0.00	0.31	10.70	.07	.23	1002	764.2	172.5	58.4
34.50	10.60	0.00	0.30	10.90	.05	.22	1005	764.2	169.9	58.3
34.75	10.81	0.00	0.30	11.11	.05	.21	1007	764.1	167.5	58.1
35.00	10.82	0.00	0.29	11.11	.05	.21	1006	764.0	165.1	57.9
35.25	11.03	0.00	0.28	11.31	.04	.20	1008	763.9	162.8	57.7
35.50	10.73	0.00	0.28	11.01	.05	.22	1004	763.8	160.5	57.5
35.75	10.02	0.00	0.27	10.29	.09	.24	994	763.7	158.3	57.3
36.00	9.41	0.00	0.26	9.67	.11	.27	985	763.6	156.2	57.0
36.25	9.62	0.00	0.25	9.87	.10	.26	989	763.5	154.2	56.8
36.50	8.80	0.00	0.24	9.04	.13	.30	978	763.4	152.2	56.5
36.75	8.60	0.00	0.24	8.84	.14	.31	974	763.3	150.3	56.2
37.00	8.70	0.00	0.23	8.93	.14	.31	975	763.1	148.4	56.0
37.25	8.59	0.00	0.22	8.81	.15	.31	973	763.0	146.6	55.7
37.50	8.91	0.00	0.21	9.12	.13	.30	978	762.8	144.9	55.4
37.75	9.05	0.00	0.20	9.25	.12	.29	980	762.7	143.2	55.1
38.00	9.08	0.00	0.20	9.28	.12	.29	980	762.5	141.5	54.8
38.25	10.03	0.00	0.19	10.22	.08	.25	994	762.4	139.9	54.5
38.50	9.56	0.00	0.18	9.74	.10	.27	986	762.2	138.4	54.2
38.75	9.28	0.00	0.18	9.46	.12	.28	981	762.1	136.8	53.9
39.00	8.91	0.00	0.17	9.08	.13	.30	975	761.9	135.4	53.5
39.25	8.63	0.00	0.16	8.79	.15	.31	970	761.7	133.9	53.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39339.50	8.46	0.00	0.16	8.62	-17.16	-17.32	967	761.5	132.6	52.9
39.75	8.18	0.00	0.15	8.33	.17	.34	962	761.3	131.2	52.5
40.00	8.21	0.00	0.15	8.36	.17	.34	962	761.1	129.9	52.2
40.25	8.23	0.00	0.14	8.37	.17	.34	962	760.9	128.6	51.9
40.50	8.46	0.00	0.14	8.60	.15	.33	966	760.7	127.3	51.5
40.75	8.70	0.00	0.13	8.83	.13	.32	971	760.5	126.1	51.2
41.00	8.82	0.00	0.12	8.94	.13	.31	971	760.3	124.9	50.8
41.25	9.67	0.00	0.12	9.79	.10	.27	982	760.1	123.7	50.4
41.50	10.00	0.00	0.12	10.12	.08	.26	987	759.9	122.5	50.1
41.75	10.43	0.00	0.11	10.54	.06	.24	993	759.6	121.4	49.7
42.00	11.07	0.00	0.11	11.18	.03	.22	1001	759.4	120.3	49.4
42.25	10.39	0.00	0.10	10.49	.06	.24	991	759.2	119.2	49.0
42.50	10.01	0.00	0.10	10.11	.07	.26	986	758.9	118.2	48.6
42.75	9.84	0.00	0.10	9.94	.07	.27	985	758.7	117.1	48.3
43.00	9.77	0.00	0.09	9.86	.08	.27	982	758.4	116.1	47.9
43.25	9.30	0.00	0.09	9.39	.11	.29	974	758.2	115.1	47.5
43.50	8.92	0.00	0.08	9.00	.13	.31	967	757.9	114.1	47.1
43.75	8.45	0.00	0.08	8.53	.15	.34	959	757.7	113.1	46.8
44.00	8.08	0.00	0.08	8.16	.17	.36	952	757.4	112.1	46.4
44.25	7.51	0.00	0.08	7.59	.20	.39	942	757.1	111.2	46.0
44.50	7.15	0.00	0.07	7.22	.23	.41	933	756.8	110.3	45.6
44.75	6.99	0.00	0.07	7.06	.24	.42	929	756.6	109.3	45.2
45.00	7.03	0.00	0.06	7.09	.24	.42	929	756.3	108.4	44.9
45.25	7.08	0.00	0.06	7.14	.23	.41	930	756.0	107.5	44.5
45.50	7.24	0.00	0.06	7.30	.22	.41	932	755.7	106.6	44.1
45.75	8.00	0.00	0.05	8.05	.18	.36	946	755.4	105.8	43.7
46.00	7.86	0.00	0.04	7.90	.19	.37	942	755.1	104.9	43.3
46.25	7.81	0.00	0.04	7.85	.18	.38	941	754.8	104.1	42.9
46.50	7.77	0.00	0.04	7.81	.19	.38	940	754.5	103.2	42.6
46.75	7.84	0.00	0.03	7.87	.19	.38	940	754.2	102.4	42.2
47.00	8.62	0.00	0.03	8.65	.14	.34	954	753.9	101.6	41.8
47.25	8.18	0.00	0.02	8.20	.16	.36	947	753.5	100.8	41.4
47.50	8.16	0.00	0.02	8.18	.16	.36	945	753.2	99.9	41.0
47.75	8.03	0.00	0.02	8.05	.16	.37	943	752.9	99.1	40.6
48.00	7.91	0.00	0.01	7.92	.17	.38	939	752.6	98.4	40.2
48.25	7.80	0.00	0.00	7.80	.18	.38	936	752.2	97.6	39.8
48.50	8.50	0.00	0.00	8.50	.14	.35	948	751.9	96.8	39.4
48.75	8.60	0.00	0.00	8.60	.13	.34	950	751.6	96.0	39.0
49.00	9.21	0.00	-0.01	9.20	.10	.32	960	751.2	95.3	38.7
49.25	9.41	0.00	-0.02	9.39	.09	.31	962	750.9	94.5	38.3
49.50	8.30	0.00	-0.02	8.28	.14	.36	944	750.6	93.8	37.9
49.75	7.70	0.00	-0.02	7.68	.18	.40	932	750.2	93.0	37.5
50.00	7.52	0.00	-0.03	7.49	.19	.41	927	749.9	92.3	37.1
50.25	7.03	0.00	-0.04	6.99	.22	.44	916	749.5	91.6	36.7
50.50	6.85	0.00	-0.05	6.80	.23	.45	911	749.2	90.8	36.3
50.75	6.89	0.00	-0.06	6.83	.23	.44	911	748.8	90.1	35.9
51.00	7.03	0.00	-0.06	6.97	.22	.43	913	748.5	89.4	35.5
51.25	7.07	0.00	-0.07	7.00	.21	.44	914	748.1	88.7	35.1
51.50	6.92	0.00	-0.08	6.84	.21	.45	912	747.8	88.0	34.7
51.75	6.77	0.00	-0.09	6.68	.23	.46	907	747.4	87.3	34.3
52.00	6.93	0.00	-0.10	6.83	.23	.44	908	747.0	86.6	33.9
52.25	7.00	0.00	-0.10	6.90	.22	.44	909	746.7	85.9	33.5
52.50	7.17	0.00	-0.10	7.07	.21	.43	912	746.3	85.2	33.1
52.75	7.05	0.00	-0.11	6.94	.21	.44	909	745.9	84.5	32.7
53.00	6.93	0.00	-0.12	6.81	.22	.45	906	745.6	83.8	32.3
53.25	6.62	0.00	-0.12	6.50	.24	.47	899	745.2	83.1	31.9
53.50	6.41	0.00	-0.13	6.28	.25	.48	893	744.9	82.5	31.5
53.75	6.62	0.00	-0.14	6.48	.24	.47	897	744.5	81.8	31.2
54.00	7.04	0.00	-0.14	6.90	.21	.44	905	744.1	81.1	30.8
54.25	7.16	0.00	-0.15	7.01	.20	.43	907	743.8	80.5	30.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39354.50	7.49	0.00	-0.15	7.34	-17.18	-17.41	913	743.4	79.8	30.0
54.75	7.53	0.00	-0.16	7.37	.18	.41	913	743.0	79.1	29.4
55.00	7.88	0.00	-0.16	7.72	.15	.39	920	742.6	78.5	29.2
55.25	8.23	0.00	-0.17	8.06	.13	.37	926	742.3	77.8	28.8
55.50	8.49	0.00	-0.17	8.32	.11	.36	931	741.9	77.2	28.4
55.75	9.78	0.00	-0.18	9.60	.03	.30	954	741.5	76.5	28.0
56.00	10.77	0.00	-0.18	10.59	-16.99	.26	968	741.2	75.9	27.6
56.25	11.97	0.00	-0.18	11.79	.94	.21	982	740.8	75.2	27.2
56.50	14.81	0.00	-0.18	14.63	.84	.12	1013	740.4	74.6	26.8
56.75	15.82	0.00	-0.19	15.63	.80	.09	1024	740.1	74.0	26.4
57.00	11.96	0.00	-0.19	11.77	.92	.21	984	739.7	73.3	26.0
57.25	11.16	0.00	-0.19	10.97	.96	.24	971	739.3	72.7	25.6
57.50	11.29	0.00	-0.19	11.10	.96	.24	971	739.0	72.1	25.2
57.75	11.11	0.00	-0.20	10.91	.97	.25	966	738.6	71.4	24.8
58.00	11.26	0.00	-0.20	11.06	.96	.24	968	738.3	70.8	24.4
58.25	11.61	0.00	-0.20	11.41	.94	.23	973	737.9	70.2	24.0
58.50	11.47	0.00	-0.20	11.27	.95	.23	970	737.5	69.6	23.6
58.75	11.44	0.00	-0.20	11.24	.95	.23	968	737.2	68.9	23.2
59.00	11.32	0.00	-0.20	11.12	.95	.24	967	736.8	68.3	22.8
59.25	11.41	0.00	-0.20	11.21	.94	.23	968	736.5	67.7	22.5
59.50	11.91	0.00	-0.20	11.71	.93	.21	972	736.1	67.1	22.1
59.75	12.23	0.00	-0.20	12.03	.91	.20	976	735.8	66.5	21.7
60.00	13.16	0.00	-0.20	12.96	.87	.17	988	735.4	65.9	21.3
60.25	16.44	0.00	-0.20	16.24	.76	.07	1023	735.1	65.3	20.9
60.50	16.69	0.00	-0.20	16.49	.75	.06	1027	734.8	64.6	20.5
60.75	16.74	0.00	-0.19	16.55	.74	.06	1029	734.4	64.0	20.1
61.00	18.63	0.00	-0.19	18.44	.68	.01	1046	734.1	63.4	19.7
61.25	17.89	0.00	-0.19	17.70	.70	.02	1039	733.8	62.8	19.3
61.50	17.97	0.00	-0.19	17.78	.70	.02	1038	733.4	62.2	18.9
61.75	20.91	0.00	-0.18	20.73	.63	-16.96	1061	733.1	61.6	18.5
62.00	18.78	0.00	-0.18	18.60	.67	-17.00	1045	732.8	61.0	18.1
62.25	17.37	0.00	-0.18	17.19	.71	.04	1033	732.5	60.4	17.7
62.50	17.70	0.00	-0.18	17.52	.70	.03	1034	732.2	59.8	17.3
62.75	18.35	0.00	-0.18	18.17	.68	.01	1039	731.8	59.2	16.9
63.00	19.22	0.00	-0.18	19.04	.66	-16.99	1046	731.5	58.6	16.5
63.25	19.08	0.00	-0.17	18.91	.66	.99	1046	731.2	58.0	16.2
63.50	17.93	0.00	-0.17	17.76	.68	-17.02	1035	730.9	57.5	15.8
63.75	18.53	0.00	-0.16	18.37	.67	.01	1038	730.6	56.9	15.4
64.00	18.93	0.00	-0.16	18.77	.66	.00	1040	730.4	56.3	15.0
64.25	19.45	0.00	-0.16	19.29	.64	-16.98	1046	730.1	55.7	14.6
64.50	19.68	0.00	-0.15	19.53	.63	.98	1048	729.8	55.1	14.2
64.75	19.51	0.00	-0.14	19.37	.64	.98	1046	729.5	54.5	13.8
65.00	18.95	0.00	-0.14	18.81	.65	-17.00	1040	729.2	53.9	13.4
65.25	19.21	0.00	-0.14	19.07	.65	-16.99	1041	729.0	53.3	13.0
65.50	20.31	-0.16	-0.13	20.02	.62	.97	1048	728.7	52.7	12.6
65.75	21.01	-0.53	-0.12	20.36	.61	.96	1051	728.5	52.2	12.2
66.00	21.31	-0.77	-0.12	20.42	.60	.96	1052	728.2	51.6	11.8
66.25	20.82	-0.92	-0.11	19.78	.62	.97	1046	728.0	51.0	11.4
66.50	21.45	-1.06	-0.11	20.28	.61	.96	1048	727.7	50.4	11.1
66.60	21.80	-1.10	-0.10	20.60	.60	.95	1051	727.6	50.2	10.9
66.80	24.84	-1.17	-0.10	23.58	.53	.89	1074	727.5	49.7	10.6
67.00	25.29	-1.23	-0.10	23.96	.52	.88	1078	727.3	49.3	10.3
67.20	34.27	-1.26	-0.09	32.92	.37	.73	1131	727.1	48.8	10.0
67.40	31.44	-1.30	-0.08	30.06	.40	.76	1117	726.9	48.3	9.7
67.60	31.90	-1.32	-0.08	30.50	.40	.76	1117	726.8	47.9	9.3
67.80	43.45	-1.35	-0.07	42.03	.26	.62	1171	726.6	47.4	9.0
68.00	51.93	-1.37	-0.06	50.50	.17	.53	1206	726.4	46.9	8.7
68.20	40.66	-1.37	-0.06	39.24	.28	.63	1162	726.3	46.5	8.4
68.40	34.29	-1.38	-0.06	32.85	.37	.73	1127	726.1	46.0	8.1
68.60	30.41	-1.39	-0.05	28.98	.43	.80	1103	726.0	45.6	7.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39368.80	24.60	-1.40	-0.04	23.16	-16.53	-16.89	1068	725.8	45.1	7.5
69.00	18.75	-1.40	-0.04	17.31	.65	-17.01	1025	725.7	44.6	7.1
69.20	21.77	-1.40	-0.03	20.34	.59	-16.95	1047	725.5	44.2	6.8
69.40	22.21	-1.39	-0.02	20.80	.58	.94	1048	725.4	43.7	6.5
69.60	26.12	-1.38	-0.02	24.72	.50	.86	1076	725.3	43.3	6.2
69.80	25.39	-1.37	-0.01	24.01	.51	.87	1072	725.2	42.8	5.9
70.00	20.66	-1.36	0.00	19.31	.60	.97	1038	725.0	42.4	5.6
70.20	19.57	-1.33	0.00	18.23	.63	.99	1029	724.9	41.9	5.3
70.40	19.40	-1.31	0.01	18.10	.64	-17.00	1026	724.8	41.4	5.0
70.60	19.37	-1.28	0.02	18.11	.64	.01	1023	724.7	41.0	4.7
70.80	19.64	-1.25	0.02	18.41	.63	.00	1026	724.6	40.5	4.3
71.00	20.68	-1.23	0.03	19.48	.60	-16.97	1036	724.5	40.1	4.0
71.20	20.92	-1.20	0.04	19.76	.59	.96	1037	724.4	39.6	3.7
71.40	20.82	-1.18	0.05	19.69	.60	.97	1035	724.3	39.2	3.4
71.60	25.94	-1.15	0.06	24.86	.49	.86	1072	724.3	38.7	3.1
71.80	34.56	-1.10	0.06	33.51	.35	.72	1121	724.2	38.2	2.8
39372.00	45.86	-1.07	0.07	44.85	-16.22	-16.59	1172	724.1	37.8	2.5
72.10	46.90	-1.05	0.07	45.92	.20	.56	1179	724.1	37.6	2.3
72.20	48.57	-1.04	0.08	47.61	.17	.52	1189	724.1	37.3	2.2
72.30	48.97	-1.02	0.08	48.03	.16	.50	1191	724.0	37.1	2.0
72.40	43.65	-1.00	0.08	42.73	.21	.56	1170	724.0	36.9	1.8
72.50	26.26	-0.98	0.08	25.36	.45	.81	1082	724.0	36.7	1.7
39372.60	23.32	-0.96	0.09	22.45	-16.51	-16.88	1060	723.9	36.4	1.5
72.80	20.30	-0.91	0.10	19.49	.59	.96	1034	723.9	36.0	1.2
73.00	17.44	-0.87	0.10	16.66	.67	-17.04	1008	723.8	35.5	0.9
73.20	15.84	-0.83	0.11	15.12	.72	.08	990	723.8	35.1	0.6
73.40	15.36	-0.78	0.12	14.70	.74	.10	983	723.8	34.6	0.3
73.60	16.15	-0.74	0.13	15.54	.71	.07	991	723.7	34.2	0.0
73.80	17.74	-0.70	0.14	17.17	.66	.03	1008	723.7	33.7	-0.3
74.00	11.87	-0.64	0.14	11.37	.84	.21	948	723.7	33.3	-0.6
74.20	10.93	-0.59	0.15	10.49	.88	.24	935	723.7	32.8	-1.0
74.40	14.12	-0.55	0.16	13.74	.75	.12	976	723.7	32.3	-1.3
74.60	17.33	-0.49	0.16	17.00	.66	.03	1008	723.7	31.9	-1.6
74.80	15.63	-0.45	0.17	15.35	.70	.07	992	723.7	31.4	-1.9
75.00	11.56	-0.40	0.18	11.34	.84	.21	945	723.7	31.0	-2.2
75.20	11.15	-0.35	0.19	11.00	.86	.22	938	723.7	30.5	-2.5
75.40	17.60	-0.30	0.20	17.49	.66	.02	1005	723.7	30.1	-2.8
75.60	18.66	-0.24	0.20	18.61	.63	-16.99	1014	723.7	29.6	-3.1
75.80	16.08	-0.20	0.21	16.09	.69	-17.06	992	723.7	29.2	-3.4
76.00	11.94	-0.15	0.22	12.02	.82	.18	951	723.8	28.7	-3.8
76.20	9.57	-0.09	0.22	9.70	.91	.27	920	723.8	28.3	-4.1
76.40	15.33	-0.04	0.23	15.52	.70	.07	989	723.9	27.8	-4.4
76.60	16.82	0.00	0.24	17.06	.65	.02	1004	723.9	27.4	-4.7
76.80	20.09	0.04	0.25	20.38	.58	-16.94	1030	724.0	26.9	-5.0
39377.00	18.39	0.11	0.26	18.76	-16.62	-16.98	1016	724.0	26.5	-5.3
77.25	15.77	0.19	0.27	16.23	.68	-17.05	992	724.1	25.9	-5.7
77.50	13.66	0.23	0.28	14.17	.75	.11	971	724.2	25.3	-6.1
77.75	13.39	0.30	0.29	13.98	.75	.11	969	724.3	24.8	-6.5
78.00	13.63	0.37	0.30	14.30	.74	.10	972	724.4	24.2	-6.9
78.25	14.19	0.45	0.31	14.95	.72	.08	978	724.5	23.6	-7.3
78.50	13.63	0.51	0.32	14.47	.74	.10	973	724.6	23.1	-7.6
78.75	12.78	0.59	0.32	13.69	.77	.12	963	724.8	22.5	-8.0
79.00	11.83	0.66	0.33	12.82	.80	.15	953	724.9	21.9	-8.4
79.25	11.19	0.74	0.34	12.27	.82	.17	946	725.1	21.4	-8.8
79.50	10.96	0.82	0.35	12.13	.82	.17	942	725.2	20.8	-9.2
79.75	10.64	0.87	0.37	11.88	.85	.18	936	725.4	20.3	-9.6
80.00	10.53	0.95	0.38	11.85	.85	.18	933	725.5	19.7	-9.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39380.25	10.62	1.02	0.39	12.03	-16.85	-17.17	934	725.7	19.1	-10.3
80.50	10.92	1.08	0.40	12.41	.83	.16	939	725.9	18.6	-10.7
80.75	11.23	1.16	0.40	12.79	.81	.15	945	726.1	18.0	-11.1
81.00	11.24	1.24	0.41	12.89	.81	.14	945	726.3	17.4	-11.5
81.25	11.25	1.29	0.42	12.96	.81	.14	946	726.5	16.9	-11.8
81.50	11.37	1.37	0.44	13.17	.81	.13	947	726.7	16.3	-12.2
81.75	11.69	1.43	0.44	13.56	.80	.12	951	727.0	15.7	-12.6
82.00	11.61	1.48	0.46	13.55	.80	.12	950	727.2	15.2	-13.0
82.25	11.64	1.58	0.46	13.68	.80	.11	950	727.4	14.6	-13.4
82.50	11.67	1.63	0.47	13.77	.79	.11	951	727.7	14.0	-13.8
82.75	12.01	1.69	0.48	14.18	.78	.10	957	727.9	13.5	-14.1
83.00	13.06	1.77	0.49	15.31	.73	.07	971	728.2	12.9	-14.5
83.25	15.94	1.84	0.50	18.28	.65	-16.99	999	728.5	12.3	-14.9
83.50	13.85	1.89	0.51	16.25	.70	-17.04	982	728.8	11.8	-15.3
83.75	13.08	1.94	0.52	15.54	.73	.06	972	729.0	11.2	-15.7
84.00	13.84	2.03	0.53	16.40	.70	.03	981	729.3	10.6	-16.1
84.25	13.78	2.10	0.54	16.42	.70	.03	982	729.6	10.1	-16.5
84.50	13.22	2.19	0.55	15.96	.72	.05	974	729.9	9.5	-16.8
84.75	13.47	2.24	0.56	16.27	.72	.04	976	730.2	8.9	-17.2
85.00	14.85	2.30	0.57	17.72	.68	.00	990	730.6	8.3	-17.6
85.25	14.59	2.39	0.58	17.56	.67	.00	990	730.9	7.8	-18.0
85.50	14.24	2.44	0.59	17.27	.68	.01	988	731.2	7.2	-18.4
85.75	13.99	2.52	0.60	17.11	.69	.01	985	731.6	6.6	-18.8
86.00	13.54	2.59	0.61	16.73	.71	.02	979	731.9	6.1	-19.2
86.25	13.49	2.65	0.62	16.76	.71	.02	978	732.3	5.5	-19.6
86.50	13.14	2.73	0.63	16.50	.72	.03	975	732.6	4.9	-20.0
86.75	13.29	2.81	0.64	16.74	.71	.02	978	733.0	4.3	-20.3
87.00	13.96	2.86	0.65	17.46	.69	.00	985	733.4	3.8	-20.7
87.25	14.52	2.94	0.66	18.12	.67	-16.98	993	733.7	3.2	-21.1
87.50	15.79	3.03	0.67	19.48	.63	.95	1005	734.1	2.6	-21.5
87.75	17.57	3.08	0.68	21.33	.60	.91	1018	734.5	2.0	-21.9
88.00	17.72	3.15	0.69	21.56	.59	.90	1021	734.9	1.4	-22.3
88.25	17.68	3.24	0.70	21.62	.58	.89	1023	735.3	0.9	-22.7
88.50	18.38	3.29	0.71	22.38	.57	.88	1028	735.7	0.3	-23.1
88.75	17.72	3.36	0.72	21.80	.58	.89	1024	736.1	359.7	-23.5
89.00	16.90	3.46	0.73	21.09	.60	.90	1019	736.5	359.1	-23.8
89.25	15.23	3.52	0.74	19.50	.63	.94	1006	736.9	358.5	-24.2
89.50	15.05	3.58	0.74	19.37	.64	.94	1003	737.4	358.0	-24.6
89.75	14.11	3.67	0.75	18.53	.67	.97	995	737.8	357.4	-25.0
90.00	13.34	3.73	0.76	17.83	.69	.98	988	738.2	356.8	-25.4
90.25	12.32	3.80	0.77	16.90	.72	-17.01	979	738.7	356.2	-25.8
90.50	11.38	3.88	0.78	16.03	.75	.03	970	739.1	355.6	-26.1
90.75	10.80	3.94	0.78	15.53	.77	.05	964	739.5	355.0	-26.5
91.00	11.22	4.00	0.79	16.01	.75	.03	969	740.0	354.4	-26.9
91.25	11.19	4.09	0.80	16.08	.75	.03	970	740.5	353.8	-27.3
91.50	12.67	4.17	0.81	17.65	.71	-16.99	983	740.9	353.2	-27.7
91.75	14.42	4.24	0.82	19.48	.66	.94	1000	741.4	352.7	-28.1
92.00	16.96	4.31	0.82	22.09	.61	.88	1018	741.8	352.1	-28.5
92.25	14.81	4.37	0.83	20.01	.66	.93	1002	742.3	351.5	-28.8
92.50	13.04	4.42	0.84	18.31	.70	.97	987	742.8	350.9	-29.2
92.75	11.87	4.52	0.85	17.24	.73	-17.00	978	743.3	350.3	-29.6
93.00	11.69	4.57	0.86	17.12	.74	.00	976	743.8	349.7	-30.0
93.25	11.91	4.65	0.86	17.41	.73	-16.99	979	744.2	349.1	-30.4
93.50	10.38	4.72	0.87	15.97	.77	-17.03	967	744.7	348.5	-30.8
93.75	9.66	4.77	0.88	15.31	.80	.05	956	745.2	347.9	-31.2
94.00	8.82	4.83	0.88	14.54	.83	.07	947	745.7	347.3	-31.5
94.25	8.49	4.89	0.89	14.27	.83	.08	947	746.2	346.7	-31.9
94.50	8.35	4.94	0.90	14.19	.83	.08	947	746.7	346.0	-32.3
94.75	8.51	5.02	0.90	14.44	.82	.07	950	747.2	345.4	-32.7
95.00	10.40	5.04	0.91	16.36	.77	.01	969	747.7	344.8	-33.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39395.25	10.26	5.13	0.92	16.31	-16.77	-17.01	967	748.2	344.2	-33.5
95.50	8.90	5.17	0.92	14.99	.82	.05	953	748.7	343.6	-33.9
95.75	8.25	5.23	0.93	14.41	.84	.07	946	749.2	343.0	-34.2
96.00	7.71	5.27	0.94	13.91	.86	.08	939	749.8	342.4	-34.6
96.25	7.28	5.33	0.94	13.54	.87	.09	936	750.3	341.7	-35.0
96.50	6.45	5.37	0.94	12.76	.90	.12	926	750.8	341.1	-35.4
96.75	5.42	5.43	0.95	11.81	.94	.15	912	751.3	340.5	-35.8
97.00	4.72	5.47	0.96	11.14	.97	.18	902	751.8	339.9	-36.2
97.25	4.12	5.50	0.96	10.58	.99	.20	895	752.4	339.2	-36.6
97.50	3.65	5.55	0.97	10.17	-17.01	.21	889	752.9	338.6	-36.9
97.75	4.31	5.58	0.97	10.86	-16.99	.18	897	753.4	338.0	-37.3
98.00	5.19	5.62	0.98	11.80	.95	.15	910	753.9	337.3	-37.7
98.25	5.08	5.69	0.98	11.75	.96	.15	909	754.4	336.7	-38.1
98.50	4.28	5.73	0.98	10.99	.99	.17	899	755.0	336.1	-38.5
98.75	3.71	5.77	0.99	10.47	-17.01	.19	892	755.5	335.4	-38.9
99.00	3.39	5.79	0.99	10.17	.02	.20	886	756.0	334.8	-39.3
99.25	3.24	5.84	0.99	10.07	.03	.21	884	756.6	334.1	-39.6
99.50	2.90	5.89	0.99	9.78	.05	.22	878	757.1	333.5	-40.0
99.75	2.57	5.92	1.00	9.49	.07	.22	872	757.6	332.8	-40.4
39400.00	2.31	5.98	1.00	9.29	.08	.23	869	758.1	332.1	-40.8
00.25	2.39	6.00	1.00	9.39	.08	.22	871	758.7	331.5	-41.1
00.50	2.45	6.04	1.00	9.49	.07	.22	873	759.2	330.8	-41.5
00.75	2.41	6.09	1.01	9.51	.07	.22	873	759.7	330.2	-41.9
01.00	2.29	6.11	1.02	9.42	.08	.22	872	760.2	329.5	-42.2
01.25	2.27	6.13	1.02	9.42	.08	.22	872	760.8	328.8	-42.6
01.50	2.41	6.19	1.02	9.62	.07	.21	875	761.3	328.2	-43.0
01.75	2.59	6.21	1.02	9.82	.06	.20	879	761.8	327.5	-43.4
02.00	3.02	6.23	1.03	10.28	.04	.18	887	762.3	326.8	-43.8
02.25	3.05	6.27	1.03	10.35	.04	.18	888	762.9	326.1	-44.1
02.50	3.35	6.30	1.03	10.67	.02	.17	894	763.4	325.4	-44.5
02.75	4.83	6.32	1.03	12.18	-16.96	.11	916	763.9	324.7	-44.9
03.00	10.05	6.33	1.04	17.42	.80	-16.95	974	764.4	324.0	-45.3
03.25	13.82	6.36	1.04	21.22	.71	.87	1006	764.9	323.3	-45.7
03.50	8.93	6.40	1.04	16.37	.83	.98	966	765.4	322.6	-46.1
03.75	7.37	6.42	1.04	14.83	.87	-17.02	950	766.0	321.9	-46.4
04.00	5.39	6.43	1.04	12.86	.94	.08	927	766.5	321.1	-46.8
04.25	5.52	6.44	1.04	13.01	.94	.08	928	767.0	320.4	-47.2
04.50	5.34	6.45	1.04	12.83	.94	.08	927	767.5	319.7	-47.6
04.75	4.12	6.46	1.04	11.63	.99	.12	911	768.0	318.9	-48.0
05.00	2.39	6.50	1.04	9.93	-17.06	.19	884	768.5	318.2	-48.3
05.25	2.18	6.50	1.04	9.71	.08	.20	880	769.0	317.4	-48.7
05.50	1.85	6.51	1.04	9.40	.09	.21	875	769.5	316.7	-49.1
05.75	1.63	6.51	1.03	9.17	.11	.21	871	769.9	315.9	-49.5
06.00	1.30	6.51	1.03	8.84	.12	.23	865	770.4	315.1	-49.9
06.25	1.18	6.51	1.03	8.72	.13	.24	863	770.9	314.3	-50.2
06.50	0.86	6.51	1.02	8.39	.14	.25	856	771.4	313.5	-50.6
06.75	0.55	6.51	1.02	8.07	.16	.27	849	771.9	312.7	-51.0
07.00	0.85	6.51	1.02	8.38	.15	.25	857	772.3	311.9	-51.4
07.25	1.06	6.51	1.02	8.59	.14	.24	861	772.8	311.1	-51.7
07.50	0.98	6.51	1.02	8.51	.14	.24	860	773.3	310.3	-52.1
07.75	1.12	6.51	1.01	8.64	.13	.23	863	773.7	309.5	-52.5
08.00	1.07	6.51	1.01	8.59	.14	.23	862	774.2	308.6	-52.8
08.25	1.15	6.51	1.00	8.65	.14	.23	865	774.6	307.8	-53.2
08.50	0.94	6.51	1.00	8.44	.15	.23	862	775.1	306.9	-53.6
08.75	0.85	6.51	1.00	8.36	.15	.24	860	775.5	306.0	-53.9
09.00	1.00	6.51	0.99	8.50	.15	.23	863	776.0	305.1	-54.3
09.25	0.97	6.50	0.99	8.46	.15	.23	863	776.4	304.2	-54.7
09.50	1.08	6.50	0.98	8.55	.14	.22	867	776.8	303.3	-55.0
09.75	1.32	6.46	0.98	8.76	.13	.21	871	777.3	302.4	-55.4
10.00	1.69	6.44	0.98	9.12	.12	.19	878	777.7	301.5	-55.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39410.25	1.70	6.42	0.98	9.10	-17.12	-17.19	877	778.1	300.5	-56.1
10.50	1.85	6.41	0.97	9.23	.11	.19	880	778.5	299.5	-56.5
10.75	3.16	6.40	0.97	10.53	.05	.13	903	778.9	298.5	-56.8
11.00	4.92	6.36	0.96	12.24	-16.98	.06	928	779.3	297.5	-57.2
11.25	5.31	6.34	0.96	12.61	.97	.05	933	779.7	296.5	-57.5
11.50	4.52	6.31	0.96	11.79	-17.00	.08	923	780.1	295.5	-57.9
11.75	4.10	6.27	0.95	11.32	.02	.09	917	780.4	294.4	-58.2
12.00	4.23	6.20	0.95	11.38	.01	.09	918	780.8	293.3	-58.6
12.25	4.32	6.16	0.94	11.42	.01	.09	920	781.2	292.2	-58.9
12.50	4.47	6.11	0.94	11.51	.01	.08	921	781.5	291.1	-59.2
12.75	4.37	6.07	0.94	11.39	.02	.08	920	781.9	290.0	-59.6
13.00	4.34	6.00	0.93	11.27	.02	.09	919	782.2	288.8	-59.9
13.25	4.88	5.94	0.92	11.73	.00	.07	926	782.6	287.6	-60.3
13.50	5.48	5.88	0.92	12.28	-16.98	.05	933	782.9	286.3	-60.6
39413.80	6.48	5.78	0.91	13.17	-16.95	-17.02	945	783.3	284.8	-61.0
14.00	8.01	5.73	0.90	14.64	.90	-16.97	964	783.6	283.8	-61.2
14.20	8.28	5.65	0.90	14.84	.89	.96	967	783.8	282.7	-61.5
14.40	9.69	5.60	0.89	16.18	.85	.92	981	784.1	281.6	-61.8
14.60	12.05	5.52	0.88	18.45	.79	.86	1002	784.3	280.5	-62.0
14.80	11.58	5.45	0.88	17.91	.80	.87	998	784.5	279.4	-62.3
15.00	10.48	5.37	0.87	16.72	.84	.90	986	784.8	278.2	-62.5
15.20	7.65	5.29	0.86	13.79	.93	.99	955	785.0	277.0	-62.8
39415.50	6.14	5.19	0.85	12.18	-16.99	-17.04	945	785.3	275.2	-63.1
15.75	5.40	5.09	0.84	11.33	-17.02	.07	924	785.6	273.6	-63.4
16.00	5.18	4.99	0.84	11.01	.03	.09	920	785.9	272.0	-63.7
16.25	5.08	4.87	0.83	10.78	.04	.09	917	786.1	270.3	-64.0
16.50	5.09	4.73	0.82	10.64	.05	.10	915	786.4	268.6	-64.3
16.75	5.22	4.57	0.81	10.60	.05	.10	915	786.6	266.8	-64.5
17.00	5.26	4.42	0.80	10.49	.05	.10	914	786.9	265.0	-64.8
17.25	5.41	4.20	0.79	10.41	.06	.11	913	787.1	263.1	-65.0
17.50	5.37	4.01	0.78	10.17	.07	.11	909	787.3	261.1	-65.3
17.75	5.13	3.77	0.77	9.68	.09	.14	901	787.5	259.1	-65.5
18.00	4.91	3.51	0.76	9.18	.11	.16	893	787.7	257.0	-65.7
18.25	5.09	3.24	0.76	9.09	.11	.16	891	787.9	254.8	-65.9
18.50	5.58	2.93	0.74	9.26	.11	.15	895	788.1	252.6	-66.1
18.75	5.78	2.59	0.74	9.10	.12	.16	892	788.3	250.2	-66.3
19.00	6.28	2.21	0.72	9.21	.11	.15	895	788.5	247.9	-66.5
19.25	6.58	1.77	0.72	9.07	.12	.16	893	788.7	245.4	-66.6
19.50	6.78	1.29	0.71	8.79	.13	.17	888	788.8	242.9	-66.8
19.75	7.29	0.78	0.70	8.77	.13	.17	888	789.0	240.3	-66.9
20.00	7.69	0.21	0.68	8.58	.14	.18	885	789.1	237.6	-67.0
20.25	7.99	0.00	0.67	8.66	.14	.18	887	789.3	234.8	-67.1
20.50	8.29	0.00	0.66	8.95	.12	.16	893	789.4	232.0	-67.2
20.75	8.38	0.00	0.65	9.03	.12	.16	894	789.5	229.2	-67.2
21.00	8.46	0.00	0.64	9.10	.11	.15	896	789.6	226.2	-67.2
21.25	8.54	0.00	0.63	9.17	.11	.15	897	789.7	223.3	-67.3
21.50	8.30	0.00	0.62	8.92	.12	.16	893	789.8	220.3	-67.3
21.75	8.26	0.00	0.61	8.87	.13	.16	892	789.9	217.2	-67.2
22.00	9.23	0.00	0.60	9.83	.08	.12	909	790.0	214.2	-67.2
22.25	9.98	0.00	0.58	10.56	.05	.09	921	790.1	211.1	-67.1
39422.40	10.65	0.00	0.58	11.23	-17.02	-17.06	931	790.1	209.3	-67.0
22.60	12.81	0.00	0.57	13.38	-16.95	-16.98	958	790.2	206.8	-66.9
22.80	14.33	0.00	0.56	14.89	.90	.94	974	790.2	204.4	-66.8
23.00	14.57	0.00	0.55	15.12	.89	.93	977	790.2	202.0	-66.7
23.20	12.11	0.00	0.54	12.65	.96	-17.01	951	790.3	199.6	-66.6
23.40	12.33	0.00	0.53	12.86	.96	.00	953	790.3	197.2	-66.5
23.60	1.48	0.00	0.05	15.28	.88	-16.92	980	790.3	194.8	-66.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39423.80	1.31	0.00	0.05	1.36	-16.93	-16.98	961	790.4	192.5	-66.1
24.00	1.17	0.00	0.05	1.22	.98	-17.02	944	790.4	190.2	-66.0
39424.25	1.11	0.00	0.05	1.16	-17.00	-17.04	938	790.4	187.4	-65.7
24.50	1.08	0.00	0.05	1.13	.02	.06	933	790.4	184.6	-65.4
24.75	1.07	0.00	0.05	1.12	.02	.06	931	790.4	181.9	-65.2
25.00	1.03	0.00	0.05	1.07	.04	.08	924	790.4	179.3	-64.9
25.25	0.93	0.00	0.04	.97	.09	.13	908	790.4	176.7	-64.5
25.50	0.91	0.00	0.04	.96	.10	.13	907	790.4	174.3	-64.2
25.75	0.89	0.00	0.04	.93	.11	.14	902	790.3	171.9	-63.9
26.00	0.85	0.00	0.04	.89	.13	.16	894	790.3	169.6	-63.5
26.25	0.79	0.00	0.04	.83	.16	.19	882	790.2	167.3	-63.1
26.50	0.66	0.00	0.04	.70	.23	.27	852	790.2	165.1	-62.8
26.75	0.66	0.00	0.04	.70	.23	.27	854	790.1	163.0	-62.4
27.00	0.69	0.00	0.04	.72	.22	.26	859	790.1	161.0	-62.0
27.25	0.71	0.00	0.03	.74	.21	.25	863	790.0	159.0	-61.6
27.50	0.73	0.00	0.03	.77	.19	.23	871	789.9	157.1	-61.1
27.75	0.75	0.00	0.03	.78	.19	.22	874	789.8	155.2	-60.7
28.00	0.74	0.00	0.03	.77	.19	.23	872	789.7	153.4	-60.3
28.25	0.75	0.00	0.03	.78	.19	.22	873	789.6	151.7	-59.8
28.50	0.78	0.00	0.03	.81	.17	.21	879	789.5	150.0	-59.4
28.75	0.96	0.00	0.03	.99	.08	.12	913	789.4	148.4	-58.9
29.00	1.08	0.00	0.03	1.10	.03	.07	930	789.3	146.8	-58.4
29.25	1.30	0.00	0.03	1.33	-16.94	-16.98	961	789.1	145.3	-58.0
29.50	1.68	0.00	0.02	1.70	.83	.88	998	789.0	143.8	-57.5
29.75	1.74	0.00	0.02	1.76	.81	.86	1003	788.9	142.3	-57.0
30.00	1.63	0.00	0.02	1.66	.84	.89	994	788.7	140.9	-56.5
30.25	1.55	0.00	0.02	1.57	.87	.92	986	788.5	139.5	-56.0
30.50	1.54	0.00	0.02	1.56	.87	.92	985	788.4	138.2	-55.5
30.75	1.41	0.00	0.02	1.42	.90	.96	972	788.2	136.8	-55.0
31.00	1.24	0.00	0.02	1.26	.96	-17.01	953	788.0	135.6	-54.5
31.25	1.15	0.00	0.02	1.17	-17.00	.05	940	787.9	134.3	-54.0
31.50	1.02	0.00	0.02	1.04	.05	.10	921	787.7	133.1	-53.5
31.75	1.00	0.00	0.02	1.02	.06	.11	918	787.5	131.9	-53.0
32.00	0.99	0.00	0.02	1.00	.07	.12	915	787.3	130.7	-52.5
32.25	0.99	0.00	0.01	1.00	.07	.12	915	787.1	129.6	-52.0
32.50	0.95	0.00	0.01	.97	.08	.13	911	786.9	128.4	-51.5
32.75	0.94	0.00	0.01	.96	.08	.14	910	786.7	127.3	-50.9
33.00	0.92	0.00	0.01	.93	.10	.15	904	786.4	126.3	-50.4
33.25	0.90	0.00	0.01	.91	.11	.16	900	786.2	125.2	-49.9
33.50	0.89	0.00	0.01	.90	.12	.17	898	786.0	124.2	-49.4
33.75	0.90	0.00	0.01	.91	.12	.17	899	785.7	123.1	-48.8
34.00	0.90	0.00	0.01	.91	.11	.17	899	785.5	122.1	-48.3
34.25	0.90	0.00	0.01	.91	.11	.17	899	785.3	121.1	-47.8
34.50	0.88	0.00	0.01	.89	.12	.18	895	785.0	120.1	-47.2
34.75	0.90	0.00	0.01	.91	.11	.17	899	784.7	119.2	-46.7
35.00	0.93	0.00	0.01	.94	.10	.16	904	784.5	118.2	-46.2
35.25	1.01	0.00	0.01	1.02	.06	.12	917	784.2	117.3	-45.6
35.50	1.07	0.00	0.01	1.08	.03	.10	926	783.9	116.4	-45.1
35.75	1.09	0.00	0.01	1.10	.02	.09	930	783.7	115.5	-44.5
36.00	1.10	0.00	0.01	1.10	.02	.09	930	783.4	114.6	-44.0
36.25	1.11	0.00	0.01	1.12	.01	.09	933	783.1	113.7	-43.5
36.50	1.13	0.00	0.01	1.14	.01	.08	935	782.8	112.8	-42.9
36.75	1.17	0.00	0.01	1.18	-16.99	.06	940	782.5	111.9	-42.4
37.00	1.19	0.00	0.01	1.20	.98	.06	943	782.2	111.1	-41.8
37.25	1.32	0.00	0.01	1.33	.92	.01	962	781.9	110.2	-41.3
37.50	1.41	0.00	0.01	1.42	.90	-16.98	971	781.6	109.4	-40.8
37.75	1.36	0.00	0.01	1.36	.92	-17.00	963	781.3	108.6	-40.2
38.00	1.34	0.00	0.01	1.34	.92	.01	961	781.0	107.8	-39.7
38.25	1.29	0.00	0.01	1.30	.94	.02	957	780.7	106.9	-39.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39438.50	1.18	0.00	0.01	1.19	-16.98	-17.06	944	780.4	106.1	-38.6
38.75	1.18	0.00	0.01	1.19	.98	.06	943	780.1	105.3	-38.0
39.00	1.27	0.00	0.01	1.28	.94	.03	954	779.8	104.5	-37.5
39.25	1.40	0.00	0.01	1.40	.90	-16.99	968	779.4	103.8	-36.9
39.50	1.49	0.00	0.01	1.50	.86	.96	980	779.1	103.0	-36.4
39.75	1.57	0.00	0.01	1.58	.83	.93	990	778.8	102.2	-35.8
40.00	1.53	0.00	0.01	1.54	.84	.94	986	778.4	101.4	-35.3
40.25	1.40	0.00	0.01	1.41	.88	.98	973	778.1	100.7	-34.7
40.50	1.44	0.00	0.01	1.44	.87	.97	977	777.8	99.9	-34.2
40.75	1.52	0.00	0.01	1.53	.84	.95	985	777.4	99.2	-33.6
41.00	1.52	0.00	0.01	1.53	.85	.96	982	777.1	98.4	-33.1
41.25	1.50	0.00	0.01	1.51	.85	.96	982	776.7	97.7	-32.5
41.50	1.55	0.00	0.01	1.56	.83	.94	989	776.4	97.0	-32.0
41.75	1.60	0.00	0.01	1.61	.81	.93	993	776.1	96.2	-31.4
42.00	1.66	0.00	0.01	1.66	.80	.91	998	775.7	95.5	-30.9
42.25	1.64	0.00	0.01	1.65	.80	.92	998	775.4	94.8	-30.3
42.50	1.66	0.00	0.01	1.67	.79	.91	999	775.0	94.1	-29.8
42.75	1.69	0.00	0.01	1.70	.78	.90	1002	774.6	93.3	-29.2
43.00	1.70	0.00	0.01	1.70	.78	.90	1002	774.3	92.6	-28.7
43.25	1.69	0.00	0.01	1.70	.78	.91	1001	773.9	91.9	-28.2
43.50	1.70	0.00	0.01	1.71	.79	.91	1000	773.6	91.2	-27.6
43.75	1.72	0.00	0.01	1.72	.79	.91	1000	773.2	90.5	-27.1
44.00	1.75	0.00	0.01	1.76	.77	.90	1003	772.9	89.8	-26.5
44.25	1.80	0.00	0.01	1.81	.76	.89	1009	772.5	89.1	-26.0
44.50	1.83	0.00	0.01	1.83	.75	.88	1011	772.2	88.4	-25.4
44.75	1.87	0.00	0.01	1.88	.74	.87	1015	771.8	87.7	-24.9
45.00	1.92	0.00	0.01	1.92	.73	.86	1018	771.5	87.1	-24.3
45.25	1.95	0.00	0.01	1.96	.71	.85	1022	771.1	86.4	-23.8
45.50	1.99	0.00	0.01	1.99	.70	.84	1025	770.7	85.7	-23.2
39445.80	2.09	0.00	0.01	2.09	-16.68	-16.82	1031	770.3	84.9	-22.6
46.00	2.12	0.00	0.01	2.12	.68	.82	1031	770.0	84.3	-22.1
46.20	2.03	0.00	0.00	2.03	.69	.84	1027	769.7	83.8	-21.7
46.40	2.01	0.00	0.00	2.02	.68	.83	1030	769.5	83.3	-21.3
46.60	2.06	0.00	0.00	2.06	.68	.83	1032	769.2	82.7	-20.8
46.80	2.01	0.00	0.00	2.01	.69	.84	1027	768.9	82.2	-20.4
47.00	2.47	0.00	0.00	2.47	.59	.75	1059	768.6	81.7	-19.9
47.20	2.40	0.00	0.00	2.41	.61	.76	1053	768.3	81.1	-19.5
47.40	2.10	0.00	0.00	2.10	.68	.83	1028	768.1	80.6	-19.1
47.60	1.92	0.00	0.00	1.93	.72	.87	1017	767.8	80.1	-18.6
47.80	2.06	0.00	0.00	2.07	.67	.83	1032	767.5	79.5	-18.2
48.00	2.63	0.00	0.00	2.63	.56	.72	1070	767.2	79.0	-17.8
48.20	2.59	0.00	0.00	2.59	.56	.72	1068	766.9	78.5	-17.3
48.40	2.16	0.00	0.00	2.16	.64	.80	1041	766.7	78.0	-16.9
48.60	2.05	0.00	0.01	2.06	.66	.83	1033	766.4	77.4	-16.5
48.80	2.11	0.00	0.01	2.11	.66	.82	1035	766.1	76.9	-16.0
49.00	2.15	0.00	0.01	2.15	.65	.81	1037	765.9	76.4	-15.6
49.20	2.45	0.00	0.01	2.46	.59	.75	1058	765.6	75.9	-15.2
49.40	2.28	0.00	0.01	2.29	.62	.79	1047	765.3	75.4	-14.7
49.60	2.19	0.00	0.01	2.20	.64	.81	1038	765.0	74.8	-14.3
49.80	2.21	0.00	0.01	2.22	.64	.81	1039	764.8	74.3	-13.9
39450.00	2.20	0.00	0.01	2.20	-16.64	-16.81	1040	764.5	73.8	-13.4
50.25	2.15	0.00	0.01	2.16	.64	.82	1038	764.2	73.2	-12.9
50.50	2.12	0.00	0.01	2.13	.65	.82	1036	763.9	72.5	-12.4
50.75	2.10	0.00	0.01	2.10	.66	.83	1032	763.5	71.9	-11.8
51.00	2.05	0.00	0.01	2.05	.67	.85	1028	763.2	71.2	-11.3
51.25	1.96	0.00	0.01	1.97	.68	.86	1024	762.9	70.6	-10.7
51.50	1.93	0.00	0.01	1.93	.69	.87	1020	762.6	70.0	-10.2
51.75	1.92	0.00	0.01	1.93	.70	.88	1019	762.3	69.3	-9.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39452.00	1.92	0.00	0.01	1.93	-16.70	-16.88	1018	762.0	68.7	-9.1
52.25	1.91	0.00	0.01	1.92	.69	.88	1019	761.7	68.1	-8.6
52.50	1.92	0.00	0.01	1.93	.69	.87	1020	761.4	67.4	-8.0
52.75	1.95	0.00	0.01	1.95	.68	.87	1022	761.1	66.8	-7.5
53.00	1.95	0.00	0.01	1.96	.68	.87	1023	760.8	66.2	-7.0
53.25	1.97	0.00	0.01	1.98	.67	.86	1027	760.5	65.5	-6.4
53.50	1.96	0.00	0.01	1.97	.66	.85	1028	760.2	64.9	-5.9
53.75	1.97	0.00	0.01	1.98	.66	.86	1028	759.9	64.3	-5.4
54.00	1.98	0.00	0.01	1.99	.66	.86	1027	759.7	63.7	-4.8
54.25	2.00	0.00	0.01	2.01	.66	.85	1028	759.4	63.0	-4.3
54.50	2.01	0.00	0.01	2.02	.66	.85	1029	759.1	62.4	-3.8
54.75	2.05	0.00	0.01	2.05	.65	.85	1032	758.9	61.8	-3.2
55.00	2.18	0.00	0.01	2.19	.62	.82	1042	758.6	61.1	-2.7
55.25	2.06	0.00	0.01	2.07	.63	.83	1037	758.4	60.5	-2.2
55.50	1.90	0.00	0.01	1.91	.66	.86	1027	758.1	59.9	-1.6
55.75	1.87	0.00	0.01	1.87	.67	.88	1023	757.9	59.3	-1.1
56.00	1.86	0.00	0.01	1.87	.68	.88	1020	757.6	58.7	-0.6
56.25	1.92	0.00	0.01	1.93	.67	.87	1023	757.4	58.0	0.0
56.50	1.96	0.00	0.01	1.97	.66	.87	1027	757.2	57.4	0.5
56.75	2.00	0.00	0.01	2.01	.65	.86	1030	757.0	56.8	1.0
57.00	2.03	0.00	0.01	2.04	.64	.85	1033	756.7	56.2	1.6
57.25	2.07	0.00	0.01	2.08	.63	.84	1037	756.5	55.5	2.1
57.50	2.11	0.00	0.01	2.12	.62	.83	1041	756.3	54.9	2.6
57.75	2.12	0.00	0.01	2.13	.61	.82	1044	756.1	54.3	3.2
58.00	2.50	0.00	0.01	2.51	.53	.74	1071	755.9	53.7	3.7
58.25	2.65	0.00	0.01	2.67	.50	.71	1080	755.7	53.1	4.2
58.50	2.22	0.00	0.01	2.23	.58	.80	1051	755.6	52.4	4.8
58.75	2.11	0.00	0.01	2.12	.61	.83	1041	755.4	51.8	5.3
59.00	2.12	0.00	0.01	2.13	.62	.83	1040	755.2	51.2	5.8
59.25	2.12	0.00	0.01	2.13	.62	.83	1039	755.1	50.6	6.3
59.50	2.46	0.01	0.01	2.42	.55	.77	1061	754.9	50.0	6.9
59.75	2.75	0.01	0.01	2.78	.48	.70	1085	754.7	49.4	7.4
60.00	2.56	0.02	0.02	2.60	.52	.74	1074	754.6	48.7	7.9
60.25	1.86	0.03	0.02	1.91	.65	.87	1027	754.5	48.1	8.4
60.50	1.75	0.04	0.02	1.81	.68	.90	1018	754.3	47.5	9.0
60.75	1.79	0.04	0.02	1.85	.68	.90	1019	754.2	46.9	9.5
61.00	1.80	0.05	0.02	1.88	.67	.89	1021	754.1	46.3	10.0
61.25	1.78	0.06	0.02	1.86	.68	.90	1019	754.0	45.7	10.5
61.50	1.75	0.07	0.02	1.84	.69	.91	1015	753.8	45.1	11.1
61.75	1.71	0.08	0.02	1.81	.70	.92	1011	753.7	44.4	11.6
62.00	1.67	0.08	0.02	1.78	.71	.92	1009	753.6	43.8	12.1
62.25	1.66	0.09	0.02	1.78	.71	.92	1009	753.6	43.2	12.6
62.50	1.65	0.10	0.02	1.78	.71	.92	1008	753.5	42.6	13.1
62.75	1.56	0.11	0.02	1.69	.73	.95	1000	753.4	42.0	13.7
63.00	1.50	0.12	0.02	1.64	.75	.96	996	753.3	41.4	14.2
63.25	1.60	0.13	0.03	1.75	.71	.93	1008	753.3	40.8	14.7
63.50	1.86	0.13	0.03	2.02	.63	.86	1034	753.2	40.1	15.2
63.75	2.27	0.14	0.03	2.44	.55	.77	1064	753.2	39.5	15.7
64.00	2.48	0.15	0.03	2.66	.51	.73	1076	753.1	38.9	16.3
64.25	2.34	0.16	0.03	2.53	.53	.75	1070	753.1	38.3	16.8
64.50	2.23	0.17	0.03	2.43	.55	.77	1065	753.0	37.7	17.3
64.75	2.30	0.18	0.03	2.51	.54	.76	1068	753.0	37.1	17.8
65.00	2.74	0.19	0.03	2.96	.46	.69	1095	753.0	36.5	18.3
65.25	2.31	0.19	0.03	2.54	.53	.75	1072	753.0	35.9	18.8
65.50	2.11	0.20	0.03	2.35	.57	.79	1058	753.0	35.2	19.4
65.75	2.10	0.21	0.03	2.34	.57	.79	1056	753.0	34.6	19.9
66.00	2.08	0.22	0.03	2.34	.58	.80	1055	753.0	34.0	20.4
66.25	2.08	0.22	0.04	2.34	.58	.79	1055	753.0	33.4	20.9
66.50	2.09	0.23	0.04	2.35	.58	.79	1056	753.1	32.8	21.4
66.75	2.05	0.24	0.04	2.33	.58	.80	1054	753.1	32.2	21.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39467.00	2.05	0.25	0.04	2.34	-16.58	-16.80	1055	753.1	31.6	22.4
67.25	2.04	0.26	0.04	2.33	.58	.80	1055	753.2	30.9	22.9
67.50	2.05	0.26	0.04	2.35	.58	.79	1056	753.2	30.3	23.4
67.75	2.10	0.27	0.04	2.42	.57	.78	1060	753.3	29.7	24.0
68.00	2.18	0.28	0.04	2.50	.55	.77	1066	753.3	29.1	24.5
68.25	2.26	0.29	0.04	2.59	.53	.75	1073	753.4	28.5	25.0
68.50	2.30	0.30	0.04	2.64	.52	.74	1076	753.5	27.9	25.5
68.75	2.35	0.30	0.04	2.70	.52	.73	1079	753.6	27.3	26.0
69.00	2.40	0.31	0.04	2.75	.51	.72	1082	753.7	26.6	26.5
69.25	2.46	0.32	0.05	2.83	.49	.71	1088	753.8	26.0	27.0
69.50	2.58	0.33	0.05	2.95	.47	.68	1097	753.9	25.4	27.5
69.75	2.72	0.33	0.05	3.10	.44	.66	1107	754.0	24.8	28.0
70.00	2.86	0.34	0.05	3.25	.42	.64	1115	754.1	24.2	28.5
70.25	2.72	0.35	0.05	3.12	.44	.65	1110	754.2	23.6	29.0
70.50	2.56	0.36	0.05	2.96	.46	.68	1100	754.4	22.9	29.5
70.75	2.45	0.37	0.05	2.87	.48	.69	1095	754.5	22.3	30.0
71.00	2.40	0.38	0.05	2.83	.48	.70	1094	754.6	21.7	30.5
71.25	2.35	0.38	0.05	2.78	.49	.70	1091	754.8	21.1	31.0
71.50	2.21	0.39	0.05	2.66	.51	.72	1084	754.9	20.5	31.5
71.75	2.19	0.40	0.05	2.64	.52	.73	1082	755.1	19.9	32.0
72.00	2.35	0.41	0.06	2.82	.49	.70	1093	755.3	19.2	32.5
39472.20	2.74	0.41	0.06	3.21	-16.43	-16.64	1116	755.4	18.8	32.9
72.40	3.09	0.42	0.06	3.57	.38	.58	1137	755.6	18.3	33.3
72.60	3.52	0.43	0.06	4.01	.32	.53	1158	755.7	17.8	33.7
72.80	3.69	0.43	0.06	4.18	.31	.51	1165	755.9	17.3	34.1
73.00	3.79	0.44	0.06	4.29	.30	.50	1168	756.0	16.8	34.5
39473.25	3.67	0.45	0.06	4.17	-16.32	-16.52	1161	756.2	16.2	35.0
73.50	3.51	0.46	0.06	4.03	.33	.53	1156	756.4	15.5	35.5
73.75	3.76	0.46	0.06	4.28	.30	.50	1170	756.6	14.9	36.0
74.00	4.11	0.47	0.06	4.65	.26	.45	1187	756.9	14.3	36.5
74.25	3.63	0.48	0.06	4.17	.31	.51	1166	757.1	13.7	37.0
74.50	2.75	0.49	0.06	3.30	.43	.62	1122	757.3	13.1	37.4
74.75	2.37	0.50	0.06	2.93	.48	.68	1101	757.5	12.4	37.9
75.00	2.28	0.50	0.07	2.85	.50	.69	1096	757.8	11.8	38.4
75.25	2.15	0.51	0.07	2.73	.52	.71	1088	758.0	11.2	38.9
75.50	2.09	0.52	0.07	2.68	.53	.72	1083	758.3	10.6	39.4
75.75	2.03	0.53	0.07	2.63	.55	.73	1080	758.5	9.9	39.9
76.00	1.99	0.53	0.07	2.59	.55	.74	1077	758.8	9.3	40.4
76.25	1.95	0.54	0.07	2.56	.56	.75	1074	759.1	8.7	40.9
76.50	1.90	0.55	0.07	2.52	.57	.76	1070	759.4	8.1	41.4
76.75	1.85	0.56	0.07	2.48	.59	.76	1066	759.6	7.4	41.9
77.00	1.83	0.56	0.07	2.47	.59	.76	1066	759.9	6.8	42.4
77.25	1.71	0.57	0.07	2.36	.61	.79	1058	760.2	6.2	42.9
77.50	1.62	0.58	0.07	2.27	.63	.80	1051	760.5	5.5	43.4
77.75	1.57	0.59	0.08	2.23	.64	.81	1046	760.8	4.9	43.9
78.00	1.53	0.59	0.08	2.20	.66	.82	1042	761.1	4.3	44.3
78.25	1.42	0.60	0.08	2.10	.68	.84	1033	761.4	3.6	44.8
78.50	1.34	0.60	0.08	2.03	.70	.85	1027	761.7	3.0	45.3
78.75	1.28	0.61	0.08	1.97	.72	.87	1020	762.0	2.4	45.8
79.00	1.18	0.62	0.08	1.88	.74	.89	1013	762.4	1.7	46.3
79.25	1.05	0.62	0.08	1.76	.77	.91	1002	762.7	1.1	46.8
79.50	0.86	0.63	0.08	1.57	.82	.96	982	763.0	0.5	47.3
79.75	1.06	0.63	0.08	1.78	.76	.91	1004	763.4	359.8	47.8
80.00	1.30	0.64	0.08	2.02	.70	.85	1027	763.7	359.2	48.3
80.25	1.42	0.65	0.08	2.15	.67	.82	1039	764.0	358.5	48.8
80.50	1.17	0.65	0.08	1.91	.73	.88	1018	764.4	357.9	49.3
80.75	1.09	0.66	0.09	1.84	.75	.89	1010	764.7	357.2	49.8
81.00	1.12	0.67	0.09	1.87	.74	.88	1013	765.1	356.6	50.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39481.25	1.08	0.67	0.09	1.84	-16.75	-16.89	1010	765.5	356.0	50.8
81.50	1.06	0.68	0.09	1.83	.76	.89	1009	765.8	355.3	51.3
81.75	1.09	0.68	0.09	1.86	.75	.88	1012	766.2	354.7	51.7
82.00	1.10	0.69	0.09	1.87	.75	.88	1013	766.6	354.0	52.2
82.25	1.00	0.69	0.09	1.78	.77	.90	1004	766.9	353.4	52.7
82.50	0.87	0.70	0.09	1.66	.81	.93	990	767.3	352.7	53.2
82.75	0.80	0.70	0.09	1.59	.83	.94	982	767.7	352.1	53.7
83.00	0.80	0.71	0.09	1.60	.82	.94	984	768.1	351.4	54.2
83.25	0.80	0.72	0.09	1.60	.82	.94	985	768.5	350.7	54.7
83.50	0.89	0.72	0.09	1.70	.79	.92	996	768.9	350.1	55.2
83.75	0.89	0.73	0.09	1.71	.79	.91	996	769.2	349.4	55.6
84.00	0.83	0.73	0.09	1.66	.81	.92	990	769.6	348.8	56.1
84.25	0.80	0.74	0.09	1.63	.82	.93	987	770.0	348.1	56.6
84.50	0.80	0.74	0.09	1.63	.82	.93	988	770.4	347.5	57.1
84.75	0.81	0.75	0.09	1.65	.81	.92	990	770.8	346.8	57.6
85.00	0.84	0.75	0.09	1.68	.81	.91	993	771.2	346.1	58.0
85.25	0.90	0.76	0.09	1.75	.79	.90	1001	771.6	345.5	58.4
85.50	0.95	0.76	0.09	1.80	.78	.88	1006	772.0	344.8	58.9
85.75	0.98	0.77	0.09	1.84	.77	.87	1011	772.5	344.2	59.3
86.00	1.01	0.77	0.10	1.88	.76	.86	1015	772.9	343.5	59.8
86.25	1.06	0.77	0.10	1.92	.75	.85	1019	773.3	342.8	60.3
86.50	1.12	0.78	0.10	1.99	.73	.83	1026	773.7	342.1	60.8
86.75	1.12	0.78	0.10	2.00	.73	.83	1027	774.1	341.5	61.2
87.00	0.71	0.78	0.10	1.59	.83	.93	984	774.5	340.8	61.7
87.25	0.51	0.79	0.10	1.39	.90	.99	957	774.9	340.1	62.2
87.50	0.53	0.79	0.10	1.42	.89	.97	961	775.4	339.4	62.6
87.75	0.60	0.79	0.10	1.49	.87	.95	970	775.8	338.7	63.1
88.00	0.62	0.80	0.10	1.52	.86	.94	974	776.2	338.1	63.6
88.25	0.56	0.80	0.10	1.46	.88	.96	966	776.6	337.4	64.0
88.50	0.55	0.80	0.10	1.45	.88	.96	965	777.1	336.7	64.5
88.75	0.52	0.80	0.10	1.42	.89	.96	961	777.5	336.0	65.0
89.00	0.47	0.81	0.10	1.38	.90	.97	956	777.9	335.3	65.4
89.25	0.40	0.81	0.10	1.30	.93	-17.00	945	778.3	334.6	65.9
89.50	0.37	0.81	0.10	1.28	.94	.00	942	778.7	333.9	66.3
89.75	0.47	0.81	0.10	1.38	.90	-16.97	956	779.2	333.2	66.8
90.00	0.57	0.82	0.10	1.48	.87	.94	971	779.6	332.5	67.3
90.25	0.60	0.82	0.10	1.51	.86	.92	976	780.0	331.8	67.7
90.50	0.58	0.82	0.10	1.50	.87	.92	975	780.4	331.0	68.2
90.75	0.58	0.82	0.10	1.50	.87	.92	975	780.9	330.3	68.7
91.00	0.61	0.82	0.10	1.53	.86	.91	979	781.3	329.6	69.1
91.25	0.67	0.82	0.10	1.59	.84	.90	986	781.7	328.9	69.6
39491.40	0.71	0.82	0.10	1.63	-16.83	-16.89	990	782.0	328.5	69.8
91.60	0.71	0.82	0.10	1.64	.83	.89	990	782.3	327.9	70.2
91.80	0.96	0.82	0.10	1.88	.77	.83	1017	782.6	327.3	70.6
92.00	1.42	0.83	0.10	2.35	.68	.74	1060	783.0	326.7	70.9
92.20	1.13	0.83	0.10	2.06	.73	.79	1035	783.3	326.1	71.3
92.40	0.84	0.83	0.10	1.77	.80	.85	1006	783.6	325.5	71.7
92.60	0.77	0.83	0.10	1.70	.82	.87	999	784.0	324.9	72.0
39492.75	0.76	0.83	0.10	1.68	-16.82	-16.87	997	784.2	324.5	72.3
93.00	0.78	0.83	0.10	1.71	.81	.86	1001	784.6	323.7	72.7
93.25	0.82	0.83	0.10	1.75	.80	.85	1005	785.0	323.0	73.2
93.50	0.91	0.83	0.10	1.84	.78	.83	1015	785.4	322.2	73.6
93.75	0.99	0.83	0.10	1.91	.77	.82	1022	785.8	321.4	74.1
94.00	0.91	0.83	0.10	1.83	.79	.83	1014	786.2	320.7	74.5
94.25	0.89	0.82	0.10	1.81	.79	.83	1013	786.6	319.9	75.0
94.50	0.78	0.82	0.10	1.70	.82	.86	1002	787.1	319.1	75.4
94.75	0.72	0.82	0.10	1.64	.83	.87	994	787.4	318.3	75.9
95.00	0.70	0.82	0.10	1.61	.84	.88	990	787.8	317.5	76.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39495.25	0.65	0.82	0.10	1.56	-16.85	-16.89	984	788.2	316.7	76.8
95.50	0.66	0.82	0.10	1.57	.85	.89	985	788.6	315.9	77.2
95.75	0.73	0.82	0.10	1.64	.83	.87	995	789.0	315.1	77.7
96.00	0.74	0.81	0.09	1.65	.83	.86	996	789.4	314.3	78.1
96.25	0.77	0.81	0.09	1.68	.82	.86	1000	789.8	313.5	78.5
96.50	0.83	0.81	0.09	1.73	.81	.84	1006	790.2	312.6	79.0
96.75	0.90	0.81	0.09	1.80	.79	.82	1014	790.5	311.8	79.4
97.00	0.97	0.81	0.09	1.87	.78	.81	1022	790.9	310.9	79.8
97.25	1.12	0.80	0.09	2.01	.74	.77	1038	791.3	310.1	80.3
39497.60	2.37	0.80	0.09	3.27	-16.53	-16.54	1134	791.1	308.9	80.9
97.80	2.55	0.80	0.09	3.44	.51	.54	1145	791.1	307.2	81.2
98.00	2.55	0.80	0.09	3.43	.51	.54	1145	792.4	307.5	81.6
98.20	2.29	0.79	0.09	3.18	.54	.57	1131	792.8	306.7	81.9
98.40	2.61	0.79	0.09	3.49	.50	.52	1151	792.9	305.0	82.3
98.60	2.57	0.79	0.09	3.44	.50	.53	1149	793.2	305.3	82.6
98.80	1.92	0.78	0.09	2.79	.60	.62	1106	793.5	304.6	82.9
39499.00	1.32	0.78	0.09	2.19	-16.71	-16.73	1057	793.7	303.8	83.3
99.25	0.99	0.78	0.09	1.85	.78	.80	1023	794.1	302.9	83.7
99.50	0.80	0.77	0.09	1.66	.83	.84	1002	794.4	301.9	84.1
99.75	0.77	0.77	0.09	1.62	.84	.85	997	794.7	301.0	84.6
39500.00	0.53	0.76	0.09	1.38	.90	.92	963	795.1	300.0	85.0
00.25	0.31	0.76	0.08	1.15	.98	-17.00	924	795.4	299.0	85.4
00.50	0.33	0.75	0.08	1.17	.97	-16.98	929	795.7	298.0	85.8
00.75	0.20	0.75	0.08	1.03	-17.03	-17.04	901	796.0	296.9	86.2
01.00	0.31	0.74	0.08	1.13	-16.99	.00	921	796.3	295.9	86.6
01.25	0.40	0.74	0.08	1.22	.96	-16.97	937	796.6	294.8	87.0
01.50	0.36	0.73	0.08	1.17	.98	.99	928	796.9	293.8	87.4
01.75	0.37	0.73	0.08	1.18	.97	.98	930	797.2	292.7	87.8
02.00	0.45	0.72	0.08	1.25	.95	.95	943	797.5	291.5	88.2
02.25	0.42	0.72	0.08	1.21	.96	.96	938	797.7	290.4	88.6
02.50	0.40	0.71	0.08	1.19	.96	.97	938	798.0	289.2	89.0
02.75	0.38	0.71	0.08	1.16	.97	.97	933	798.3	288.1	89.4
03.00	0.34	0.70	0.08	1.12	.98	.99	926	798.5	286.8	89.8
03.25	0.32	0.69	0.08	1.09	-17.00	-17.00	918	798.8	285.6	90.2
03.50	0.62	0.69	0.07	1.38	-16.90	-16.90	970	799.0	284.3	90.6
39503.60	0.70	0.69	0.07	1.46	-16.88	-16.88	982	799.1	283.8	90.7
03.80	1.05	0.68	0.07	1.80	.79	.79	1026	799.3	282.8	91.0
04.00	2.12	0.68	0.07	2.88	.58	.58	1122	799.5	281.7	91.3
04.20	2.95	0.67	0.07	3.69	.47	.48	1172	799.7	280.6	91.6
04.40	1.39	0.67	0.07	2.13	.71	.71	1063	799.9	279.5	91.9
04.60	0.60	0.66	0.07	1.33	.92	.92	962	800.1	278.4	92.2
04.80	0.43	0.66	0.07	1.16	.98	.97	930	800.2	277.2	92.5
39505.00	0.38	0.65	0.07	1.10	-16.99	-16.99	921	800.4	276.1	92.8
05.25	0.35	0.65	0.07	1.06	-17.01	-17.01	913	800.6	274.5	93.1
05.50	0.32	0.64	0.07	1.03	.02	.02	906	800.8	273.0	93.5
05.75	0.31	0.63	0.07	1.01	.03	.03	902	801.0	271.4	93.8
06.00	0.29	0.62	0.07	.97	.05	.05	891	801.2	269.8	94.1
06.25	0.25	0.62	0.06	.93	.07	.06	881	801.4	268.1	94.4
06.50	0.24	0.61	0.06	.91	.08	.07	876	801.5	266.3	94.8
06.75	0.20	0.60	0.06	.86	.10	.09	864	801.7	264.5	95.1
07.00	0.18	0.59	0.06	.83	.11	.11	857	801.9	262.7	95.4
07.25	0.20	0.58	0.06	.84	.11	.10	861	802.0	260.7	95.7
07.50	0.27	0.57	0.06	.90	.07	.07	880	802.2	258.8	95.9
07.75	0.28	0.56	0.06	.90	.07	.07	881	802.3	256.7	96.2
08.00	0.29	0.55	0.06	.90	.07	.07	882	802.5	254.6	96.5
08.25	0.31	0.55	0.06	.91	.07	.06	885	802.6	252.4	96.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39508.50	0.31	0.53	0.05	.90	-17.07	-17.06	883	802.7	250.2	97.0
08.75	0.30	0.52	0.05	.88	.08	.07	878	802.8	247.9	97.2
09.00	0.31	0.51	0.05	.88	.08	.08	876	802.9	245.5	97.4
09.25	0.32	0.51	0.05	.87	.09	.08	874	803.0	243.0	97.6
09.50	0.33	0.50	0.05	.87	.09	.08	876	803.1	240.5	97.8
09.75	0.32	0.49	0.05	.85	.09	.09	871	803.2	237.9	97.9
10.00	0.35	0.48	0.05	.87	.09	.08	876	803.3	235.3	98.1
10.25	0.40	0.47	0.04	.91	.07	.06	886	803.3	232.5	98.2
10.50	0.49	0.46	0.04	.99	.03	.02	905	803.4	229.7	98.3
10.75	0.57	0.44	0.04	1.06	.01	.00	920	803.5	226.8	98.4
11.00	0.58	0.43	0.04	1.05	.01	.00	918	803.5	223.9	98.5
11.25	0.53	0.42	0.04	.99	.04	.03	905	803.6	220.9	98.6
11.50	0.53	0.41	0.04	.98	.04	.03	903	803.6	217.9	98.6
11.75	0.54	0.40	0.04	.98	.04	.03	903	803.6	214.8	98.6
12.00	0.56	0.39	0.04	.99	.03	.02	907	803.6	211.8	98.6
12.25	0.58	0.38	0.03	1.00	.03	.02	911	803.6	208.7	98.5
12.50	0.61	0.37	0.03	1.01	.02	.01	913	803.7	205.6	98.5
12.75	0.61	0.36	0.03	1.00	.03	.02	912	803.7	202.5	98.4
13.00	0.63	0.35	0.03	1.01	.02	.01	914	803.6	199.4	98.3
13.25	0.65	0.34	0.03	1.01	.03	.02	913	803.6	196.4	98.2
13.50	0.65	0.33	0.03	1.01	.03	.02	912	803.6	193.4	98.0
13.75	0.68	0.31	0.03	1.02	.02	.01	916	803.6	190.4	97.8
14.00	0.69	0.30	0.03	1.02	.02	.01	917	803.5	187.5	97.6
14.25	0.71	0.29	0.02	1.02	.02	.01	917	803.5	184.7	97.4
14.50	0.70	0.28	0.02	1.01	.02	.02	916	803.5	181.9	97.2
14.75	0.73	0.27	0.02	1.02	.02	.01	919	803.4	179.1	97.0
15.00	0.74	0.26	0.02	1.02	.02	.01	918	803.3	176.5	96.7
15.25	0.78	0.24	0.02	1.04	.01	.01	922	803.3	173.9	96.4
15.50	0.78	0.23	0.02	1.03	.02	.01	919	803.2	171.4	96.1
15.75	0.79	0.22	0.02	1.03	.02	.01	919	803.1	168.9	95.8
16.00	0.80	0.21	0.02	1.03	.02	.01	920	803.0	166.6	95.5
16.25	0.84	0.20	0.01	1.05	.01	.00	926	802.9	164.3	95.1
16.50	0.85	0.19	0.01	1.05	.01	.00	925	802.8	162.1	94.8
16.75	0.87	0.17	0.01	1.06	.01	.00	928	802.7	159.9	94.4
17.00	0.89	0.16	0.01	1.06	.01	.00	929	802.6	157.8	94.0
17.25	0.90	0.15	0.01	1.06	.01	.00	930	802.4	155.8	93.6
17.50	0.90	0.14	0.01	1.05	.01	.00	927	802.3	153.9	93.2
17.75	0.94	0.13	0.01	1.08	.00	-16.99	932	802.1	152.0	92.8
39518.00	1.03	0.12	0.01	1.15	-16.97	-16.97	947	802.0	150.2	92.4
18.20	1.12	0.11	0.00	1.23	.94	.94	961	801.9	148.7	92.0
18.40	1.16	0.10	0.00	1.27	.93	.93	967	801.7	147.4	91.7
18.60	1.35	0.09	0.00	1.45	.87	.87	996	801.6	146.0	91.4
18.80	1.18	0.08	0.00	1.26	.93	.93	966	801.5	144.7	91.0
19.00	1.06	0.08	0.00	1.14	.98	.97	944	801.3	143.4	90.6
39519.25	1.06	0.07	0.00	1.13	-16.98	-16.98	943	801.2	141.8	90.2
19.50	1.04	0.06	0.00	1.10	.99	.99	937	801.0	140.3	89.7
19.75	1.05	0.05	0.00	1.09	-17.00	.99	935	800.8	138.8	89.3
20.00	1.06	0.04	0.00	1.09	.00	.99	936	800.6	137.4	88.8
20.25	1.05	0.03	0.00	1.08	.00	-17.00	935	800.4	136.0	88.3
20.50	1.07	0.02	-0.01	1.08	.00	.00	935	800.2	134.6	87.8
20.75	1.11	0.01	-0.01	1.11	-16.99	-16.99	941	799.9	133.2	87.3
21.00	1.14	0.00	-0.01	1.14	.98	.98	947	799.7	131.9	86.9
21.25	1.15	-0.01	-0.01	1.13	.98	.98	945	799.5	130.7	86.4
21.50	1.18	-0.01	-0.01	1.16	.97	.97	951	799.2	129.4	85.9
21.75	1.21	-0.02	-0.01	1.18	.96	.97	955	799.0	128.2	85.4
22.00	1.27	-0.03	-0.01	1.22	.95	.95	962	798.8	127.0	84.9
22.25	1.31	-0.03	-0.01	1.26	.93	.94	969	798.5	125.9	84.4
22.50	1.38	-0.04	-0.02	1.32	.91	.92	978	798.2	124.7	83.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39522.75	1.39	-0.05	-0.02	1.32	-16.91	-16.92	978	798.0	123.6	83.3
23.00	1.39	-0.05	-0.02	1.32	.91	.92	979	797.7	122.5	82.8
23.25	1.38	-0.06	-0.02	1.30	.92	.93	977	797.4	121.4	82.3
23.50	1.36	-0.06	-0.02	1.28	.93	.94	973	797.1	120.4	81.8
23.75	1.34	-0.07	-0.02	1.25	.94	.95	968	796.9	119.3	81.3
24.00	1.31	-0.07	-0.02	1.22	.95	.96	963	796.6	118.3	80.7
24.25	1.32	-0.07	-0.02	1.22	.95	.96	963	796.3	117.3	80.2
24.50	1.33	-0.07	-0.03	1.23	.94	.96	965	796.0	116.3	79.7
24.75	1.39	-0.07	-0.03	1.29	.92	.94	975	795.7	115.4	79.2
25.00	1.45	-0.07	-0.03	1.34	.91	.92	983	795.3	114.4	78.6
25.25	1.51	-0.07	-0.03	1.41	.89	.90	993	795.0	113.5	78.1
25.50	1.59	-0.07	-0.03	1.48	.86	.88	1002	794.7	112.5	77.6
25.75	1.71	-0.07	-0.03	1.60	.83	.85	1017	794.4	111.6	77.0
26.00	1.92	-0.07	-0.03	1.82	.77	.79	1042	794.0	110.7	76.5
26.25	2.09	-0.06	-0.03	1.99	.73	.75	1059	793.7	109.8	75.9
26.50	1.92	-0.06	-0.04	1.83	.77	.79	1043	793.4	108.9	75.4
26.75	1.83	-0.05	-0.04	1.75	.79	.81	1034	793.0	108.1	74.9
27.00	1.70	-0.03	-0.04	1.63	.82	.85	1020	792.7	107.2	74.3
27.25	1.68	-0.02	-0.04	1.62	.82	.85	1019	792.3	106.4	73.8
27.50	1.56	0.00	-0.04	1.52	.85	.88	1007	791.9	105.5	73.2
27.75	1.59	0.00	-0.04	1.55	.84	.87	1010	791.6	104.7	72.7
28.00	1.66	0.00	-0.04	1.62	.82	.85	1019	791.2	103.9	72.1
28.25	1.71	0.00	-0.04	1.67	.81	.84	1025	790.8	103.0	71.6
39528.40	2.05	0.00	-0.04	2.01	-16.73	-16.76	1059	790.6	102.6	71.2
28.60	2.31	0.00	-0.05	2.27	.67	.71	1081	790.3	101.9	70.8
28.80	3.68	0.00	-0.05	3.63	.47	.50	1168	790.0	101.3	70.4
29.00	4.81	0.00	-0.05	4.76	.34	.38	1222	789.7	100.6	69.9
29.20	4.62	0.00	-0.05	4.57	.34	.39	1219	789.4	100.0	69.5
29.40	4.07	0.00	-0.05	4.02	.40	.44	1194	789.1	99.4	69.0
29.60	3.43	0.00	-0.05	3.38	.48	.52	1160	788.8	98.8	68.6
29.80	2.64	0.00	-0.05	2.59	.60	.64	1111	788.5	98.2	68.1
39530.00	2.35	0.00	-0.05	2.30	-16.65	-16.70	1089	788.2	97.5	67.7
30.25	2.02	0.00	-0.05	1.97	.72	.77	1059	787.8	96.8	67.1
30.50	1.90	0.00	-0.05	1.85	.75	.80	1045	787.4	96.0	66.6
30.75	1.86	0.00	-0.05	1.81	.76	.81	1039	787.0	95.3	66.0
31.00	1.78	0.00	-0.05	1.73	.79	.84	1030	786.6	94.5	65.5
31.25	1.64	0.00	-0.05	1.59	.82	.87	1014	786.2	93.8	64.9
31.50	1.61	0.00	-0.06	1.56	.83	.88	1011	785.7	93.1	64.3
31.75	1.71	0.00	-0.06	1.65	.80	.86	1021	785.3	92.3	63.8
32.00	1.84	0.00	-0.06	1.79	.77	.82	1035	784.9	91.6	63.2
32.25	1.84	0.00	-0.06	1.78	.77	.83	1035	784.5	90.9	62.7
32.50	2.13	0.00	-0.06	2.07	.69	.76	1064	784.1	90.2	62.1
32.75	2.12	0.00	-0.06	2.06	.69	.76	1063	783.7	89.5	61.5
33.00	1.93	0.00	-0.06	1.87	.74	.81	1045	783.3	88.8	61.0
33.25	1.82	0.00	-0.06	1.76	.77	.83	1033	782.8	88.1	60.4
33.50	1.71	0.00	-0.06	1.65	.80	.86	1021	782.4	87.4	59.8
33.75	1.65	0.00	-0.06	1.59	.81	.88	1014	782.0	86.7	59.3
34.00	1.79	0.00	-0.06	1.73	.77	.84	1029	781.6	86.0	58.7
34.25	1.91	0.00	-0.06	1.85	.74	.82	1041	781.1	85.3	58.1
34.50	2.21	0.00	-0.06	2.15	.68	.75	1067	780.7	84.6	57.6
34.75	2.30	0.00	-0.07	2.23	.66	.74	1073	780.3	84.0	57.0
35.00	2.40	0.00	-0.07	2.34	.63	.71	1083	779.9	83.3	56.4
35.25	2.36	0.00	-0.07	2.30	.64	.72	1080	779.4	82.6	55.8
35.50	2.32	0.00	-0.07	2.25	.65	.73	1075	779.0	81.9	55.3
35.75	2.24	0.00	-0.07	2.17	.66	.75	1069	778.6	81.3	54.7
36.00	2.19	0.00	-0.07	2.12	.67	.76	1065	778.1	80.6	54.1
36.25	2.28	0.00	-0.07	2.21	.65	.74	1072	777.7	80.0	53.6
36.50	2.32	0.00	-0.07	2.25	.64	.74	1074	777.3	79.3	53.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39536.75	2.37	0.00	-0.07	2.30	-16.64	-16.73	1077	776.9	78.6	52.4
37.00	2.47	0.00	-0.07	2.39	.61	.71	1085	776.4	78.0	51.9
37.25	2.56	0.00	-0.07	2.49	.58	.69	1096	776.0	77.3	51.3
39537.40	2.57	0.00	-0.07	2.50	-16.58	-16.68	1098	775.7	77.0	50.9
37.50	3.46	0.00	-0.07	3.39	.44	.55	1151	775.6	76.7	50.7
37.60	5.30	0.00	-0.07	5.23	.24	.35	1234	775.4	76.4	50.5
37.70	7.39	0.00	-0.07	7.32	.08	.19	1307	775.2	76.2	50.3
37.80	4.99	0.00	-0.07	4.92	.25	.36	1230	775.1	75.9	50.0
37.90	3.35	0.00	-0.07	3.28	.44	.55	1150	774.9	75.7	49.8
38.00	2.79	0.00	-0.07	2.72	.53	.64	1115	774.7	75.4	49.6
39538.25	2.60	0.00	-0.07	2.53	-16.56	-16.68	1101	774.3	74.8	49.0
38.50	2.60	0.00	-0.07	2.53	.57	.68	1099	773.9	74.1	48.4
38.75	2.51	0.00	-0.07	2.44	.58	.70	1092	773.5	73.5	47.9
39.00	2.27	0.00	-0.07	2.19	.63	.74	1073	773.1	72.9	47.3
39.25	2.25	0.00	-0.07	2.18	.63	.75	1071	772.6	72.2	46.7
39.50	2.20	0.00	-0.07	2.13	.64	.76	1067	772.2	71.6	46.1
39.75	2.07	0.00	-0.07	2.00	.67	.79	1055	771.8	71.0	45.6
40.00	2.01	0.00	-0.07	1.93	.69	.81	1047	771.4	70.4	45.0
40.25	2.24	0.00	-0.07	2.16	.64	.76	1065	771.0	69.7	44.4
40.50	2.36	-0.01	-0.07	2.27	.61	.74	1075	770.6	69.1	43.8
40.75	2.49	-0.04	-0.07	2.37	.59	.72	1084	770.2	68.5	43.3
41.00	2.58	-0.07	-0.07	2.43	.57	.70	1089	769.8	67.9	42.7
41.25	2.64	-0.10	-0.07	2.47	.57	.70	1090	769.4	67.2	42.1
41.50	2.69	-0.12	-0.07	2.49	.56	.70	1091	769.0	66.6	41.6
41.75	2.73	-0.15	-0.07	2.51	.56	.69	1092	768.6	66.0	41.0
42.00	2.78	-0.17	-0.07	2.54	.55	.69	1094	768.3	65.4	40.4
42.25	2.85	-0.19	-0.07	2.59	.54	.68	1098	767.9	64.8	39.8
42.50	3.03	-0.21	-0.07	2.75	.51	.65	1107	767.5	64.2	39.3
42.75	3.38	-0.23	-0.07	3.08	.45	.60	1129	767.1	63.6	38.7
43.00	3.70	-0.25	-0.07	3.38	.41	.56	1146	766.8	63.0	38.1
43.25	3.71	-0.26	-0.07	3.39	.41	.56	1145	766.4	62.4	37.5
43.50	3.79	-0.27	-0.07	3.45	.40	.55	1148	766.0	61.8	37.0
43.75	4.03	-0.28	-0.07	3.68	.36	.52	1160	765.7	61.2	36.4
44.00	4.28	-0.29	-0.07	3.92	.33	.49	1172	765.3	60.6	35.8
44.25	4.33	-0.30	-0.07	3.96	.32	.48	1175	765.0	60.0	35.2
44.50	4.51	-0.31	-0.07	4.12	.30	.46	1182	764.7	59.4	34.7
44.75	4.97	-0.32	-0.07	4.59	.25	.41	1204	764.3	58.8	34.1
45.00	4.85	-0.33	-0.07	4.46	.25	.42	1200	764.0	58.2	33.5
45.25	4.22	-0.33	-0.07	3.82	.33	.49	1170	763.7	57.6	32.9
45.50	4.09	-0.34	-0.07	3.68	.35	.52	1161	763.4	57.0	32.4
45.75	4.07	-0.35	-0.07	3.66	.35	.52	1161	763.1	56.4	31.8
46.00	4.17	-0.35	-0.07	3.75	.33	.50	1166	762.8	55.8	31.2
46.25	4.56	-0.36	-0.06	4.14	.28	.45	1185	762.5	55.2	30.6
46.50	4.97	-0.36	-0.06	4.54	.23	.41	1204	762.2	54.6	30.1
46.75	5.12	-0.36	-0.06	4.69	.21	.39	1210	761.9	54.0	29.5
47.00	5.17	-0.37	-0.06	4.74	.21	.39	1212	761.6	53.4	28.9
47.25	4.97	-0.37	-0.06	4.54	.22	.40	1205	761.3	52.8	28.3
47.50	5.03	-0.37	-0.06	4.60	.22	.40	1206	761.1	52.2	27.7
47.75	5.10	-0.37	-0.06	4.67	.21	.40	1207	760.8	51.6	27.2
48.00	5.18	-0.37	-0.06	4.75	.20	.39	1210	760.6	51.1	26.6
48.25	5.30	-0.37	-0.06	4.87	.19	.38	1214	760.3	50.5	26.0
48.50	5.43	-0.36	-0.06	5.01	.18	.37	1219	760.1	49.9	25.4
48.75	5.56	-0.36	-0.06	5.14	.16	.35	1225	759.8	49.3	24.9
49.00	5.53	-0.36	-0.06	5.12	.16	.35	1224	759.6	48.7	24.3
49.25	5.23	-0.36	-0.05	4.82	.19	.38	1213	759.4	48.1	23.7
49.50	5.26	-0.36	-0.05	4.85	.19	.38	1214	759.2	47.5	23.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39549.75	5.58	-0.35	-0.05	5.17	-16.16	-16.35	1225	759.0	47.0	22.5
50.00	5.84	-0.35	-0.05	5.44	.13	.33	1234	758.8	46.4	22.0
50.25	6.12	-0.35	-0.05	5.73	.11	.30	1245	758.6	45.8	21.4
50.50	6.44	-0.34	-0.05	6.04	.08	.28	1255	758.4	45.2	20.8
50.75	6.66	-0.34	-0.05	6.28	.06	.26	1262	758.3	44.6	20.2
51.00	6.85	-0.33	-0.05	6.47	.05	.25	1267	758.1	44.1	19.6
51.25	7.05	-0.33	-0.05	6.68	.04	.23	1272	758.0	43.5	19.0
51.50	7.25	-0.32	-0.05	6.88	.02	.22	1279	757.8	42.9	18.5
51.75	7.44	-0.32	-0.04	7.08	.01	.20	1285	757.7	42.3	17.9
52.00	7.61	-0.31	-0.04	7.25	-15.99	.19	1290	757.6	41.7	17.3
52.25	7.76	-0.30	-0.04	7.42	.98	.18	1294	757.5	41.2	16.7
52.50	8.10	-0.30	-0.04	7.77	.96	.16	1304	757.3	40.6	16.1
52.75	8.66	-0.29	-0.04	8.33	.93	.12	1319	757.2	40.0	15.5
53.00	8.43	-0.28	-0.04	8.11	.94	.13	1312	757.1	39.4	14.9
53.25	8.35	-0.28	-0.04	8.03	.95	.14	1309	757.1	38.9	14.4
53.50	8.43	-0.27	-0.04	8.12	.94	.14	1311	757.0	38.3	13.8
53.75	8.54	-0.26	-0.03	8.24	.93	.13	1313	756.9	37.7	13.2
54.00	8.64	-0.25	-0.03	8.35	.93	.13	1316	756.9	37.1	12.6
54.25	8.71	-0.25	-0.03	8.43	.92	.12	1318	756.8	36.5	12.0
54.50	9.09	-0.24	-0.03	8.82	.90	.10	1328	756.8	36.0	11.4
54.75	9.61	-0.23	-0.03	9.35	.87	.07	1340	756.7	35.4	10.8
55.00	9.49	-0.22	-0.03	9.24	.88	.07	1337	756.7	34.8	10.2
55.25	8.73	-0.21	-0.03	8.49	.92	.11	1318	756.7	34.2	9.7
55.50	8.39	-0.21	-0.02	8.16	.94	.14	1308	756.7	33.7	9.1
55.75	8.26	-0.20	-0.02	8.04	.95	.15	1304	756.7	33.1	8.5
56.00	8.10	-0.19	-0.02	7.89	.96	.16	1299	756.7	32.5	7.9
56.25	7.75	-0.18	-0.02	7.55	.98	.18	1289	756.7	32.0	7.3
56.50	7.49	-0.17	-0.02	7.30	-16.00	.20	1281	756.8	31.4	6.7
56.75	7.25	-0.16	-0.02	7.07	.01	.21	1275	756.8	30.8	6.2
57.00	6.82	-0.15	-0.02	6.65	.03	.24	1263	756.9	30.2	5.6
57.25	6.59	-0.14	-0.01	6.43	.05	.26	1254	756.9	29.7	5.0
57.50	6.31	-0.14	-0.01	6.16	.08	.28	1245	757.0	29.1	4.4
57.75	6.15	-0.13	-0.01	6.01	.09	.29	1240	757.1	28.5	3.8
58.00	6.13	-0.12	-0.01	6.00	.09	.29	1239	757.1	27.9	3.3
58.25	6.62	-0.11	-0.01	6.50	.05	.25	1254	757.2	27.4	2.7
58.50	6.78	-0.10	-0.01	6.68	.04	.24	1260	757.3	26.8	2.1
58.75	6.70	-0.09	0.00	6.60	.04	.24	1259	757.4	26.2	1.5
59.00	6.58	-0.09	0.00	6.49	.05	.24	1256	757.6	25.7	1.0
59.25	6.31	-0.08	0.00	6.24	.06	.26	1249	757.7	25.1	0.4
59.50	6.15	-0.07	0.00	6.08	.08	.27	1243	757.8	24.5	-0.2
59.75	5.86	-0.06	0.00	5.80	.10	.30	1232	758.0	23.9	-0.8
60.00	5.60	-0.05	0.00	5.56	.12	.32	1223	758.1	23.4	-1.4
60.25	5.37	-0.04	0.00	5.34	.15	.34	1214	758.3	22.8	-1.9
60.50	5.24	-0.03	0.01	5.22	.16	.35	1209	758.4	22.2	-2.5
60.75	5.11	-0.02	0.01	5.09	.17	.37	1205	758.6	21.7	-3.1
61.00	4.97	-0.01	0.01	4.97	.18	.38	1199	758.8	21.1	-3.7
61.25	4.84	0.00	0.01	4.85	.20	.39	1194	759.0	20.5	-4.3
61.50	4.78	0.01	0.01	4.80	.20	.39	1192	759.2	19.9	-4.8
61.75	4.69	0.02	0.01	4.73	.21	.40	1189	759.4	19.4	-5.4
62.00	4.61	0.03	0.01	4.66	.22	.41	1186	759.6	18.8	-6.0
62.25	4.57	0.04	0.02	4.63	.22	.41	1184	759.8	18.2	-6.6
62.50	4.61	0.05	0.02	4.67	.21	.40	1187	760.1	17.7	-7.1
62.75	4.68	0.06	0.02	4.76	.20	.39	1191	760.3	17.1	-7.7
63.00	4.49	0.07	0.02	4.58	.23	.41	1183	760.5	16.5	-8.3
63.25	4.40	0.08	0.02	4.50	.23	.42	1179	760.8	15.9	-8.9
63.50	4.30	0.09	0.02	4.41	.25	.43	1175	761.1	15.4	-9.5
63.75	4.19	0.10	0.02	4.31	.26	.44	1169	761.3	14.8	-10.1
64.00	4.10	0.11	0.03	4.24	.27	.45	1167	761.6	14.2	-10.6
64.25	4.02	0.12	0.03	4.17	.28	.46	1163	761.9	13.6	-11.2
64.50	3.95	0.13	0.03	4.11	.29	.47	1159	762.2	13.1	-11.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39564.75	3.89	0.14	0.03	4.06	-16.30	-16.47	1156	762.5	12.5	-12.4
65.00	3.84	0.14	0.03	4.01	.30	.48	1154	762.8	11.9	-13.0
65.25	3.76	0.16	0.03	3.95	.31	.49	1151	763.1	11.3	-13.6
65.50	3.70	0.16	0.04	3.90	.32	.49	1149	763.4	10.7	-14.1
65.75	3.64	0.17	0.04	3.85	.32	.49	1147	763.7	10.2	-14.7
66.00	3.51	0.18	0.04	3.73	.33	.50	1143	764.0	9.6	-15.3
66.25	3.41	0.19	0.04	3.65	.34	.51	1140	764.4	9.0	-15.9
66.50	3.40	0.20	0.04	3.64	.35	.51	1139	764.7	8.4	-16.5
66.75	3.46	0.21	0.04	3.72	.34	.51	1141	765.1	7.8	-17.1
67.00	3.50	0.22	0.04	3.77	.34	.50	1144	765.4	7.3	-17.7
67.25	3.81	0.23	0.05	4.09	.30	.46	1158	765.8	6.7	-18.2
67.50	3.98	0.24	0.05	4.26	.28	.44	1167	766.2	6.1	-18.8
67.75	4.18	0.25	0.05	4.47	.25	.41	1177	766.5	5.5	-19.4
39571.50	3.39	0.39	0.07	3.85	-16.35	-16.48	1145	772.8	356.6	-28.3
72.00	3.37	0.40	0.07	3.85	.37	.49	1142	773.8	355.4	-29.4
72.50	3.34	0.42	0.07	3.84	.37	.49	1141	774.7	354.2	-30.6
73.00	3.36	0.44	0.08	3.88	.36	.48	1145	775.7	353.0	-31.8
73.50	3.39	0.46	0.08	3.93	.36	.47	1147	776.7	351.8	-33.0
74.00	3.45	0.47	0.08	4.00	.36	.46	1148	777.7	350.6	-34.1
74.50	3.50	0.49	0.08	4.07	.36	.45	1151	778.7	349.4	-35.3
75.00	3.51	0.50	0.09	4.10	.36	.45	1153	779.7	348.2	-36.5
75.50	3.58	0.52	0.09	4.18	.35	.44	1156	780.8	346.9	-37.6
39575.75	3.62	0.52	0.09	4.23	-16.35	-16.43	1159	781.3	346.3	-38.2
76.00	3.71	0.53	0.09	4.33	.34	.42	1164	781.8	345.7	-38.8
76.25	3.81	0.54	0.09	4.44	.32	.40	1170	782.3	345.1	-39.3
76.50	4.02	0.54	0.09	4.65	.30	.38	1180	782.9	344.4	-39.9
76.75	4.10	0.55	0.09	4.74	.29	.37	1183	783.4	343.8	-40.5
77.00	4.21	0.56	0.09	4.86	.29	.36	1186	784.0	343.2	-41.1
77.25	4.27	0.56	0.09	4.92	.29	.36	1186	784.5	342.5	-41.6
77.50	4.21	0.57	0.09	4.87	.30	.36	1184	785.1	341.9	-42.2
77.75	4.14	0.57	0.09	4.81	.30	.37	1182	785.6	341.3	-42.8
78.00	4.14	0.58	0.09	4.81	.31	.37	1179	786.2	340.6	-43.4
78.25	4.12	0.58	0.10	4.80	.32	.38	1178	786.7	340.0	-43.9
78.50	4.08	0.59	0.10	4.76	.32	.38	1178	787.3	339.4	-44.5
78.75	4.07	0.59	0.10	4.76	.31	.37	1180	787.8	338.7	-45.1
79.00	4.05	0.60	0.10	4.75	.32	.37	1179	788.4	338.1	-45.6
79.25	4.05	0.60	0.10	4.75	.32	.37	1180	788.9	337.4	-46.2
79.50	4.04	0.61	0.10	4.75	.32	.37	1180	789.5	336.8	-46.8
79.75	4.06	0.61	0.10	4.77	.32	.37	1180	790.1	336.1	-47.4
80.00	4.02	0.62	0.10	4.74	.32	.37	1180	790.6	335.5	-47.9
80.25	4.01	0.62	0.10	4.73	.33	.37	1179	791.2	334.8	-48.5
80.50	3.42	0.63	0.10	4.15	.40	.43	1153	791.8	334.1	-49.1
80.75	2.63	0.63	0.10	3.37	.49	.53	1117	792.4	333.5	-49.6
81.00	2.53	0.64	0.10	3.27	.51	.54	1112	792.9	332.8	-50.2
81.25	2.88	0.64	0.10	3.62	.46	.49	1129	793.5	332.1	-50.8
81.50	3.47	0.65	0.10	4.22	.39	.42	1157	794.1	331.4	-51.4
81.75	3.96	0.65	0.10	4.72	.34	.36	1180	794.6	330.7	-51.9
82.00	4.03	0.65	0.10	4.79	.33	.35	1183	795.2	330.1	-52.5
82.25	3.43	0.66	0.10	4.19	.40	.42	1157	795.8	329.4	-53.1
82.50	3.15	0.66	0.11	3.91	.44	.45	1143	796.4	328.7	-53.7
82.75	3.17	0.67	0.11	3.94	.43	.44	1147	796.9	327.9	-54.3
83.00	2.97	0.67	0.11	3.75	.45	.46	1138	797.5	327.2	-54.9
83.25	2.45	0.67	0.11	3.23	.53	.53	1111	798.1	326.5	-55.4
83.50	1.72	0.68	0.11	2.51	.64	.65	1067	798.7	325.8	-56.0
83.75	1.56	0.68	0.11	2.35	.68	.68	1055	799.2	325.1	-56.6
84.00	1.86	0.68	0.11	2.65	.63	.63	1075	799.8	324.3	-57.2
84.25	2.12	0.69	0.11	2.91	.58	.58	1092	800.4	323.6	-57.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39584.50	2.26	0.69	0.11	3.07	-16.56	-16.55	1102	800.9	322.8	-58.4
84.75	2.13	0.69	0.11	2.93	.58	.57	1095	801.5	322.1	-58.9
85.00	1.81	0.69	0.11	2.61	.63	.62	1075	802.1	321.3	-59.5
85.25	1.66	0.69	0.11	2.46	.66	.65	1064	802.6	320.6	-60.1
85.50	1.59	0.69	0.11	2.39	.67	.66	1060	803.2	319.8	-60.7
85.75	1.52	0.70	0.11	2.33	.69	.67	1056	803.8	319.0	-61.3
86.00	1.44	0.70	0.11	2.25	.70	.69	1050	804.3	318.2	-61.8
86.25	1.40	0.70	0.11	2.21	.71	.69	1047	804.9	317.4	-62.4
86.50	1.32	0.70	0.11	2.13	.73	.71	1041	805.4	316.6	-63.0
86.75	1.26	0.70	0.11	2.07	.74	.72	1036	806.0	315.8	-63.6
87.00	1.20	0.70	0.11	2.01	.76	.73	1031	806.5	315.0	-64.2
87.25	1.14	0.70	0.11	1.95	.77	.74	1026	807.1	314.2	-64.7
87.50	1.10	0.70	0.11	1.91	.78	.75	1023	807.6	313.3	-65.3
87.75	1.04	0.70	0.11	1.85	.79	.77	1018	808.2	312.5	-65.9
88.00	0.98	0.70	0.11	1.79	.81	.78	1012	808.7	311.6	-66.4
88.25	0.96	0.70	0.11	1.77	.81	.78	1010	809.2	310.7	-67.0
88.50	0.92	0.70	0.11	1.73	.82	.79	1006	809.7	309.8	-67.6
88.75	0.88	0.70	0.11	1.69	.83	.80	1003	810.3	308.9	-68.2
89.00	0.85	0.70	0.11	1.66	.84	.81	999	810.8	308.0	-68.7
89.25	0.84	0.70	0.11	1.65	.85	.81	998	811.3	307.1	-69.3
89.50	0.84	0.70	0.10	1.65	.85	.81	998	811.8	306.2	-69.8
89.75	0.91	0.70	0.10	1.72	.83	.79	1007	812.3	305.2	-70.4
90.00	0.90	0.70	0.10	1.70	.83	.79	1005	812.8	304.3	-71.0
90.25	0.88	0.70	0.10	1.68	.84	.79	1002	813.3	303.3	-71.5
90.50	0.89	0.70	0.10	1.69	.84	.79	1004	813.8	302.3	-72.1
90.75	0.90	0.69	0.10	1.69	.84	.79	1005	814.3	301.3	-72.6
91.00	0.86	0.69	0.10	1.66	.84	.79	1001	814.8	300.2	-73.2
91.25	0.82	0.69	0.10	1.61	.86	.81	996	815.2	299.2	-73.7
91.50	0.79	0.69	0.10	1.58	.87	.82	994	815.7	298.1	-74.3
91.75	0.77	0.68	0.10	1.55	.87	.82	990	816.2	297.0	-74.8
92.00	0.71	0.68	0.10	1.49	.89	.84	982	816.6	295.9	-75.3
92.25	0.68	0.68	0.20	1.55	.88	.82	989	817.1	294.7	-75.9
92.50	0.64	0.68	0.20	1.52	.88	.83	985	817.5	293.6	-76.4
92.75	0.64	0.67	0.20	1.51	.89	.83	987	818.0	292.4	-76.9
93.00	0.60	0.67	0.20	1.47	.90	.84	982	818.4	291.1	-77.5
93.25	0.60	0.67	0.10	1.36	.93	.87	967	818.8	289.9	-78.0
93.50	0.58	0.66	0.09	1.34	.94	.88	964	819.2	288.6	-78.5
93.75	0.53	0.66	0.09	1.28	.96	.90	955	819.7	287.3	-79.0
94.00	0.46	0.65	0.09	1.21	.98	.92	943	820.1	285.9	-79.5
94.25	0.47	0.65	0.09	1.21	.98	.92	943	820.5	284.6	-80.0
94.50	0.47	0.64	0.09	1.21	.98	.92	943	820.8	283.1	-80.5
94.75	0.48	0.64	0.09	1.21	.98	.92	943	821.2	281.7	-81.0
95.00	0.52	0.64	0.09	1.25	.97	.90	950	821.6	280.1	-81.5
95.25	0.56	0.63	0.09	1.28	.96	.89	955	822.0	278.6	-82.0
95.50	0.62	0.63	0.09	1.33	.94	.87	964	822.3	277.0	-82.5
95.75	0.66	0.62	0.09	1.37	.93	.86	970	822.7	275.3	-82.9
96.00	0.71	0.62	0.08	1.41	.91	.84	975	823.0	273.6	-83.4
96.25	0.74	0.61	0.08	1.44	.91	.83	979	823.3	271.8	-83.9
96.50	0.76	0.60	0.08	1.45	.90	.83	980	823.7	270.0	-84.3
96.75	0.78	0.60	0.08	1.46	.90	.82	980	824.0	268.1	-84.7
97.00	0.82	0.59	0.08	1.49	.89	.81	984	824.3	266.2	-85.2
97.25	0.96	0.58	0.08	1.62	.86	.78	1001	824.6	264.2	-85.6
97.50	0.84	0.58	0.08	1.50	.89	.81	986	824.9	262.1	-86.0
97.75	0.81	0.57	0.08	1.46	.90	.82	982	825.2	259.9	-86.4
98.00	0.66	0.56	0.08	1.30	.95	.87	960	825.4	257.7	-86.8
98.25	0.67	0.56	0.08	1.31	.94	.87	961	825.7	255.4	-87.2
98.50	0.76	0.55	0.07	1.38	.92	.84	972	826.0	253.0	-87.5
98.75	0.92	0.54	0.07	1.53	.88	.80	994	826.2	250.5	-87.9
99.00	0.96	0.53	0.07	1.57	.87	.79	998	826.5	248.0	-88.2
99.25	1.20	0.53	0.07	1.80	.81	.72	1024	826.7	245.4	-88.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39599.50	1.36	0.52	0.07	1.95	-16.78	-16.68	1039	826.9	242.7	-88.8
99.75	1.10	0.51	0.07	1.68	.84	.75	1009	827.1	239.9	-89.1
39600.00	0.91	0.50	0.07	1.48	.89	.81	984	827.3	237.1	-89.3
00.25	0.90	0.49	0.07	1.46	.90	.81	982	827.5	234.2	-89.6
00.50	0.91	0.48	0.07	1.46	.90	.81	984	827.7	231.2	-89.8
00.75	0.93	0.47	0.06	1.47	.89	.81	986	827.9	228.2	-90.0
01.00	0.95	0.46	0.06	1.47	.89	.81	986	828.1	225.1	-90.2
01.25	0.99	0.46	0.06	1.51	.88	.80	991	828.2	222.1	-90.3
01.50	1.01	0.45	0.06	1.51	.88	.80	991	828.4	218.9	-90.4
01.75	1.03	0.44	0.06	1.52	.88	.79	993	828.5	215.8	-90.5
02.00	1.06	0.43	0.06	1.54	.87	.79	996	828.6	212.7	-90.6
02.25	1.09	0.42	0.06	1.57	.87	.78	998	828.7	209.6	-90.7
02.50	1.31	0.41	0.05	1.78	.81	.72	1022	828.8	206.5	-90.7
02.75	1.19	0.40	0.05	1.65	.85	.75	1007	829.0	203.4	-90.7
03.00	1.14	0.39	0.05	1.58	.86	.77	999	829.0	200.4	-90.7
03.25	1.13	0.38	0.05	1.56	.87	.78	997	829.1	197.4	-90.7
03.50	1.17	0.37	0.05	1.59	.86	.77	1002	829.2	194.4	-90.6
03.75	1.26	0.36	0.05	1.67	.84	.75	1011	829.3	191.5	-90.5
04.00	1.30	0.35	0.05	1.70	.83	.74	1012	829.3	188.7	-90.4
04.25	1.38	0.34	0.04	1.77	.82	.72	1020	829.4	186.0	-90.3
04.50	1.41	0.33	0.04	1.78	.81	.72	1022	829.4	183.3	-90.2
04.75	1.10	0.32	0.04	1.46	.90	.80	981	829.4	180.7	-90.0
05.00	0.94	0.31	0.04	1.29	.95	.86	954	829.5	178.2	-89.8
05.25	0.90	0.31	0.04	1.25	.96	.87	947	829.5	175.8	-89.6
05.50	0.36	0.30	0.04	1.20	.98	.89	940	829.5	173.5	-89.4
05.75	0.86	0.29	0.04	1.18	.98	.90	939	829.4	171.2	-89.2
06.00	0.83	0.28	0.03	1.14	-17.00	.92	932	829.4	169.0	-89.0
06.25	0.83	0.26	0.03	1.13	.00	.92	930	829.4	166.9	-88.8
06.50	0.81	0.26	0.03	1.10	.01	.93	924	829.4	164.8	-88.5
06.75	0.81	0.24	0.03	1.09	.02	.94	922	829.3	162.8	-88.3
07.00	0.82	0.23	0.03	1.09	.02	.94	923	829.3	160.9	-88.0
07.25	0.83	0.22	0.03	1.08	.02	.94	921	829.2	159.0	-87.7
07.50	0.86	0.21	0.03	1.10	.01	.93	925	829.1	157.2	-87.4
07.75	0.87	0.20	0.02	1.10	.01	.93	926	829.0	155.5	-87.1
08.00	0.89	0.19	0.02	1.11	.01	.93	928	828.9	153.8	-86.8
08.25	0.91	0.18	0.02	1.11	.01	.93	928	828.8	152.1	-86.5
08.50	0.95	0.17	0.02	1.14	-16.99	.92	934	828.7	150.6	-86.2
08.75	0.99	0.17	0.02	1.18	.98	.90	942	828.6	149.0	-85.9
09.00	1.04	0.15	0.02	1.21	.97	.89	947	828.5	147.5	-85.5
09.25	1.06	0.15	0.02	1.22	.97	.89	949	828.4	146.1	-85.2
09.50	1.10	0.14	0.01	1.25	.96	.88	954	828.2	144.6	-84.8
09.75	1.14	0.13	0.01	1.28	.95	.87	957	828.1	143.3	-84.5
10.00	1.15	0.12	0.01	1.28	.95	.87	956	827.9	141.9	-84.1
10.25	1.18	0.11	0.01	1.30	.94	.86	960	827.8	140.6	-83.8
10.50	1.20	0.10	0.01	1.31	.94	.86	963	827.6	139.3	-83.4
10.75	1.19	0.09	0.01	1.29	.94	.87	960	827.4	138.1	-83.1
11.00	1.21	0.08	0.01	1.30	.94	.86	963	827.2	136.9	-82.7
11.25	1.23	0.07	0.01	1.30	.94	.86	961	827.0	135.7	-82.3
11.50	1.22	0.07	0.00	1.29	.95	.87	957	826.8	134.5	-81.9
11.75	1.16	0.06	0.00	1.22	.97	.89	945	826.6	133.4	-81.6
12.00	1.11	0.05	0.00	1.16	.99	.91	931	826.4	132.2	-81.2
39612.20	1.34	0.04	0.00	1.38	-16.92	-16.83	970	826.2	131.4	-80.9
12.40	1.75	0.03	0.00	1.79	.81	.72	1027	826.0	130.5	-80.6
12.60	2.62	0.03	0.00	2.65	.64	.55	1105	825.8	129.7	-80.3
12.80	2.34	0.02	0.00	2.36	.69	.60	1081	825.6	128.8	-80.0
13.00	2.17	0.02	0.00	2.16	.72	.64	1065	825.4	128.0	-79.6
13.20	2.27	0.01	0.00	2.27	.70	.62	1073	825.2	127.2	-79.3
13.40	2.81	0.01	-0.01	2.81	.61	.52	1115	825.0	126.4	-79.0
13.60	3.92	0.00	-0.01	3.91	.47	.37	1180	824.8	125.6	-78.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39613.80	2.83	0.00	-0.01	2.82	-16.61	-16.51	1117	824.6	124.8	-78.4
14.00	1.28	-0.01	-0.01	1.26	.96	.87	950	824.3	124.0	-78.1
39614.25	1.15	-0.01	-0.01	1.12	-17.01	-16.93	922	824.0	123.1	-77.7
14.50	0.92	-0.02	-0.01	.89	.11	-17.04	869	823.8	122.1	-77.2
14.75	1.01	-0.03	-0.01	.97	.07	.00	892	823.5	121.2	-76.8
15.00	1.10	-0.04	-0.02	1.05	.04	-16.97	911	823.1	120.3	-76.4
15.25	1.14	-0.04	-0.02	1.08	.02	.95	917	822.8	119.4	-76.0
15.50	1.14	-0.05	-0.02	1.07	.03	.96	915	822.5	118.5	-75.6
15.75	1.16	-0.05	-0.02	1.08	.02	.96	918	822.2	117.6	-75.2
16.00	1.16	-0.06	-0.02	1.08	.02	.96	919	821.9	116.8	-74.8
16.25	1.16	-0.06	-0.02	1.07	.03	.96	916	821.5	115.9	-74.4
16.50	1.10	-0.07	-0.02	1.01	.05	.99	904	821.2	115.1	-74.0
16.75	1.10	-0.07	-0.02	1.00	.05	.99	904	820.8	114.3	-73.6
17.00	1.12	-0.07	-0.03	1.02	.05	.99	908	820.5	113.4	-73.2
17.25	1.32	-0.08	-0.03	1.22	-16.97	.91	946	820.1	112.6	-72.7
17.50	1.41	-0.08	-0.03	1.30	.94	.88	959	819.7	111.8	-72.3
17.75	1.19	-0.08	-0.03	1.08	-17.02	.96	919	819.4	111.0	-71.9
18.00	1.12	-0.09	-0.03	1.01	.05	.99	908	819.0	110.2	-71.5
18.25	1.10	-0.09	-0.03	.98	.06	-17.01	902	818.6	109.4	-71.1
18.50	1.09	-0.09	-0.03	.96	.07	.02	897	818.2	108.6	-70.6
18.75	1.05	-0.09	-0.04	.92	.09	.04	886	817.8	107.9	-70.2
19.00	1.05	-0.09	-0.04	.92	.09	.04	885	817.4	107.1	-69.8
19.25	1.04	-0.09	-0.04	.91	.09	.04	884	817.0	106.3	-69.4
19.50	1.04	-0.09	-0.04	.91	.09	.04	885	816.6	105.6	-69.0
19.75	1.04	-0.10	-0.04	.90	.10	.05	883	816.2	104.8	-68.5
20.00	1.06	-0.10	-0.04	.92	.09	.04	889	815.7	104.1	-68.1
20.25	1.05	-0.10	-0.04	.91	.09	.05	887	815.3	103.4	-67.7
20.50	1.06	-0.10	-0.05	.92	.09	.04	890	814.9	102.6	-67.3
20.75	1.06	-0.10	-0.05	.92	.09	.04	889	814.5	101.9	-66.8
21.00	1.11	-0.10	-0.05	.96	.07	.03	899	814.0	101.2	-66.4
21.25	1.16	-0.10	-0.05	1.02	.04	.00	912	813.6	100.4	-66.0
21.50	0.98	-0.10	-0.05	.83	.13	.09	865	813.1	99.7	-65.5
21.75	0.88	-0.10	-0.05	.72	.19	.15	833	812.7	99.0	-65.1
22.00	1.10	-0.10	-0.05	.94	.08	.04	897	812.2	98.3	-64.7
22.25	1.29	-0.10	-0.05	1.13	.00	-16.96	937	811.7	97.6	-64.2
22.50	1.23	-0.11	-0.05	1.07	.02	.98	926	811.3	96.9	-63.8
22.75	1.04	-0.11	-0.06	.88	.10	-17.07	883	810.8	96.2	-63.4
23.00	1.04	-0.11	-0.06	.87	.11	.08	880	810.3	95.5	-62.9
23.25	1.24	-0.11	-0.06	1.07	.02	-16.99	927	809.9	94.8	-62.5
23.50	1.47	-0.12	-0.06	1.30	-16.93	.90	969	809.4	94.1	-62.1
23.75	1.25	-0.12	-0.06	1.07	-17.02	.99	929	808.9	93.5	-61.6
24.00	1.23	-0.13	-0.06	1.04	.03	-17.00	924	808.4	92.8	-61.2
24.25	1.25	-0.13	-0.06	1.06	.02	.00	928	807.9	92.1	-60.8
24.50	1.20	-0.14	-0.06	1.00	.05	.02	917	807.5	91.4	-60.3
24.75	1.14	-0.14	-0.07	.93	.08	.05	901	807.0	90.8	-59.9
25.00	1.58	-0.15	-0.07	1.37	-16.91	-16.89	983	806.5	90.1	-59.4
25.25	1.63	-0.15	-0.07	1.41	.90	.87	989	806.0	89.4	-59.0
25.50	1.18	-0.16	-0.07	.95	-17.07	-17.05	908	805.5	88.8	-58.6
25.75	1.29	-0.17	-0.07	1.05	.02	.01	932	805.0	88.1	-58.1
26.00	1.40	-0.17	-0.07	1.16	-16.98	-16.96	952	804.5	87.4	-57.7
26.25	1.40	-0.18	-0.07	1.15	.98	.97	951	804.0	86.8	-57.3
26.50	1.41	-0.19	-0.07	1.14	.98	.97	950	803.5	86.1	-56.8
26.75	1.44	-0.20	-0.07	1.17	.97	.96	956	803.0	85.5	-56.4
27.00	1.50	-0.20	-0.07	1.22	.95	.94	965	802.5	84.8	-55.9
27.25	1.63	-0.21	-0.08	1.34	.91	.90	984	801.9	84.2	-55.5
27.50	1.76	-0.22	-0.08	1.46	.87	.87	1001	801.4	83.5	-55.0
27.75	1.75	-0.23	-0.08	1.45	.87	.87	1000	800.9	82.9	-54.6
28.00	1.78	-0.24	-0.08	1.46	.87	.87	1002	800.4	82.2	-54.2
28.25	1.81	-0.25	-0.08	1.49	.86	.86	1007	799.9	81.6	-53.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39628.50	1.81	-0.25	-0.08	1.48	-16.86	-16.86	1006	799.4	81.0	-53.3
28.75	1.81	-0.27	-0.08	1.46	.87	.87	1004	798.9	80.3	-52.8
29.00	2.00	-0.27	-0.08	1.65	.81	.82	1027	798.4	79.7	-52.4
29.25	2.12	-0.28	-0.08	1.75	.79	.79	1039	797.9	79.1	-51.9
29.50	2.28	-0.29	-0.08	1.90	.75	.76	1055	797.4	78.4	-51.5
29.75	2.15	-0.30	-0.08	1.76	.78	.79	1041	796.9	77.8	-51.0
39630.00	2.15	-0.32	-0.09	1.74	-16.78	-16.80	1040	796.3	77.2	-50.6
30.20	2.15	-0.33	-0.09	1.74	.78	.80	1040	795.9	76.7	-50.3
30.40	2.16	-0.33	-0.09	1.74	.78	.80	1041	795.5	76.1	-49.9
30.60	2.20	-0.34	-0.09	1.77	.77	.79	1044	795.1	75.6	-49.5
30.80	2.29	-0.34	-0.09	1.86	.75	.77	1054	794.7	75.1	-49.2
31.00	2.38	-0.35	-0.09	1.95	.73	.75	1063	794.3	74.6	-48.8
31.20	2.44	-0.35	-0.09	2.00	.71	.74	1069	793.9	74.1	-48.5
31.40	2.46	-0.36	-0.09	2.01	.71	.74	1070	793.5	73.6	-48.1
31.60	2.54	-0.37	-0.09	2.08	.70	.72	1076	793.1	73.1	-47.8
31.80	2.72	-0.37	-0.09	2.25	.66	.69	1091	792.7	72.7	-47.4
32.00	2.97	-0.38	-0.09	2.50	.61	.64	1112	792.3	72.2	-47.0
32.20	2.95	-0.38	-0.09	2.48	.60	.64	1113	791.9	71.7	-46.7
32.40	3.06	-0.39	-0.09	2.58	.59	.62	1119	791.6	71.2	-46.3
32.60	2.87	-0.39	-0.09	2.39	.62	.66	1105	791.2	70.7	-46.0
32.80	2.68	-0.40	-0.09	2.19	.66	.70	1090	790.8	70.2	-45.6
33.00	2.92	-0.40	-0.09	2.42	.62	.66	1108	790.4	69.7	-45.2
33.20	3.19	-0.41	-0.09	2.69	.57	.61	1127	790.0	69.2	-44.9
33.40	3.14	-0.41	-0.10	2.63	.57	.61	1126	789.6	68.7	-44.5
33.60	3.17	-0.42	-0.10	2.65	.56	.61	1130	789.2	68.2	-44.2
33.80	3.26	-0.42	-0.10	2.74	.54	.59	1137	788.9	67.7	-43.8
34.00	3.80	-0.43	-0.10	3.28	.45	.51	1172	788.5	67.2	-43.4
34.20	4.01	-0.43	-0.10	3.48	.42	.48	1185	788.1	66.7	-43.1
34.40	3.83	-0.44	-0.10	3.29	.45	.51	1173	787.7	66.2	-42.7
34.60	3.94	-0.44	-0.10	3.40	.44	.49	1179	787.4	65.7	-42.4
34.80	3.77	-0.44	-0.10	3.23	.45	.51	1172	787.0	65.3	-42.0
35.00	4.13	-0.45	-0.10	3.58	.40	.46	1194	786.7	64.8	-41.6
35.20	4.58	-0.45	-0.10	4.03	.35	.41	1215	786.3	64.3	-41.3
35.40	4.53	-0.45	-0.10	3.97	.36	.42	1210	785.9	63.8	-40.9
35.60	4.34	-0.46	-0.10	3.79	.37	.44	1206	785.6	63.3	-40.6
39635.80	7.61	-0.46	-0.10	7.06	-16.07	-16.14	1337	785.3	62.8	-40.2
35.90	14.65	-0.46	-0.10	14.09	-15.77	-15.83	1500	785.1	62.6	-40.0
36.00	9.50	-0.46	-0.10	8.94	.97	-16.03	1390	784.9	62.3	-39.8
36.10	11.69	-0.46	-0.10	11.13	.86	-15.93	1443	784.7	62.1	-39.7
36.20	21.85	-0.46	-0.10	21.29	.57	.63	1619	784.6	61.8	-39.5
36.30	13.62	-0.46	-0.10	13.05	.78	.84	1489	784.4	61.6	-39.3
36.40	12.66	-0.46	-0.10	12.09	.81	.88	1469	784.2	61.4	-39.1
36.50	10.63	-0.46	-0.10	10.06	.90	.97	1422	784.1	61.1	-38.9
39636.60	7.07	-0.47	-0.10	6.50	-16.10	-16.17	1323	783.9	60.9	-38.8
36.80	5.20	-0.47	-0.10	4.63	.26	.33	1253	783.6	60.4	-38.4
37.00	5.02	-0.47	-0.10	4.45	.28	.35	1243	783.2	59.9	-38.0
37.20	3.94	-0.47	-0.10	3.36	.40	.48	1191	782.9	59.4	-37.7
37.40	4.19	-0.47	-0.10	3.61	.37	.45	1204	782.6	58.9	-37.3
37.60	5.68	-0.47	-0.10	5.11	.22	.30	1267	782.3	58.4	-36.9
37.80	5.23	-0.47	-0.10	4.66	.26	.35	1249	782.0	58.0	-36.6
38.00	5.02	-0.47	-0.10	4.44	.28	.36	1242	781.7	57.5	-36.2
38.20	5.22	-0.47	-0.10	4.64	.26	.34	1251	781.4	57.0	-35.9
38.40	5.32	-0.48	-0.10	4.74	.25	.33	1255	781.1	56.5	-35.5
38.60	5.23	-0.48	-0.10	4.65	.25	.34	1253	780.8	56.0	-35.1
39638.70	5.19	-0.48	-0.10	4.61	-16.25	-16.34	1254	780.6	55.8	-35.0
38.80	5.58	-0.48	-0.10	5.00	.21	.30	1270	780.5	55.5	-34.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39638.90	5.78	-0.48	-0.10	5.20	-16.19	-16.28	1279	780.3	55.3	-34.6
39.00	6.98	-0.47	-0.10	6.41	.10	.19	1321	780.2	55.1	-34.4
39.10	7.37	-0.47	-0.10	6.80	.08	.16	1332	780.1	54.8	-34.2
39.20	5.51	-0.47	-0.10	4.93	.22	.31	1267	779.9	54.6	-34.0
39.30	6.15	-0.47	-0.10	5.57	.17	.25	1291	779.8	54.3	-33.9
39.40	7.17	-0.47	-0.10	6.59	.09	.18	1327	779.6	54.1	-33.7
39.50	7.25	-0.47	-0.10	6.67	.08	.17	1330	779.5	53.9	-33.5
39.60	5.44	-0.47	-0.10	4.87	.22	.31	1266	779.4	53.6	-33.3
39.70	5.02	-0.47	-0.10	4.45	.27	.36	1247	779.2	53.4	-33.1
39.80	4.73	-0.47	-0.10	4.15	.30	.39	1233	779.1	53.1	-33.0
39.90	4.62	-0.47	-0.10	4.05	.31	.41	1228	779.0	52.9	-32.8
39640.00	4.53	-0.47	-0.10	3.96	-16.33	-16.42	1222	778.8	52.6	-32.6
40.20	4.22	-0.47	-0.10	3.65	.37	.46	1205	778.6	52.2	-32.2
40.40	3.93	-0.47	-0.10	3.37	.40	.50	1191	778.3	51.7	-31.9
40.60	3.86	-0.46	-0.10	3.30	.41	.51	1188	778.1	51.2	-31.5
39640.70	3.90	-0.46	-0.10	3.34	-16.40	-16.50	1190	778.0	51.0	-31.3
40.80	4.30	-0.46	-0.10	3.74	.35	.45	1214	777.9	50.7	-31.1
40.90	5.14	-0.46	-0.10	4.57	.25	.35	1254	777.7	50.5	-30.9
41.00	7.42	-0.46	-0.10	6.85	.07	.17	1335	777.6	50.2	-30.8
41.10	7.31	-0.46	-0.10	6.75	.08	.18	1332	777.5	50.0	-30.6
41.20	6.40	-0.46	-0.10	5.84	.14	.24	1302	777.4	49.8	-30.4
41.30	5.35	-0.46	-0.10	4.80	.22	.32	1265	777.3	49.5	-30.2
41.40	5.06	-0.46	-0.10	4.51	.25	.35	1254	777.2	49.3	-30.0
41.50	4.77	-0.45	-0.10	4.22	.28	.39	1240	777.1	49.0	-29.9
39641.60	4.53	-0.45	-0.10	3.98	-16.32	-16.42	1226	777.0	48.8	-29.7
41.80	4.52	-0.45	-0.10	3.97	.33	.44	1222	776.7	48.3	-29.3
42.00	4.43	-0.45	-0.10	3.88	.34	.44	1219	776.5	47.8	-28.9
42.20	3.91	-0.44	-0.10	3.37	.40	.51	1193	776.3	47.4	-28.6
42.40	3.84	-0.44	-0.10	3.30	.42	.53	1186	776.1	46.9	-28.2
42.60	3.62	-0.44	-0.10	3.09	.45	.56	1175	775.9	46.4	-27.8
42.80	3.61	-0.43	-0.10	3.08	.45	.56	1175	775.7	45.9	-27.5
43.00	3.57	-0.43	-0.10	3.04	.45	.56	1173	775.6	45.4	-27.1
43.20	3.61	-0.43	-0.10	3.08	.45	.56	1176	775.4	45.0	-26.7
43.40	3.49	-0.42	-0.10	2.97	.46	.58	1170	775.2	44.5	-26.4
43.60	3.40	-0.42	-0.10	2.88	.47	.58	1167	775.0	44.0	-26.0
43.80	3.34	-0.42	-0.10	2.83	.47	.59	1166	774.9	43.5	-25.6
44.00	3.27	-0.42	-0.10	2.76	.48	.60	1162	774.7	43.0	-25.3
44.20	3.17	-0.41	-0.10	2.66	.50	.62	1155	774.6	42.6	-24.9
44.40	3.09	-0.41	-0.10	2.59	.51	.63	1150	774.4	42.1	-24.5
44.60	3.00	-0.40	-0.10	2.50	.53	.65	1142	774.3	41.6	-24.2
44.80	2.85	-0.40	-0.10	2.35	.56	.68	1132	774.1	41.1	-23.8
45.00	2.79	-0.40	-0.09	2.29	.57	.69	1128	774.0	40.6	-23.4
45.20	2.76	-0.39	-0.09	2.27	.58	.70	1127	773.9	40.2	-23.1
45.40	2.71	-0.39	-0.09	2.22	.59	.71	1122	773.8	39.7	-22.7
45.60	2.72	-0.39	-0.09	2.24	.59	.71	1124	773.7	39.2	-22.3
45.80	2.80	-0.38	-0.09	2.32	.56	.69	1133	773.6	38.7	-21.9
46.00	2.79	-0.38	-0.09	2.32	.56	.68	1134	773.5	38.2	-21.6
46.20	2.80	-0.37	-0.09	2.34	.56	.68	1136	773.4	37.7	-21.2
46.40	2.73	-0.37	-0.09	2.28	.58	.70	1129	773.3	37.3	-20.8
46.60	2.48	-0.36	-0.09	2.02	.63	.76	1110	773.2	36.8	-20.4
39646.80	2.29	-0.36	-0.09	1.84	-16.66	-16.79	1098	773.1	36.3	-20.1
46.90	3.25	-0.35	-0.09	2.80	.48	.61	1165	773.1	36.1	-19.9
47.00	3.96	-0.35	-0.09	3.51	.38	.51	1206	773.0	35.8	-19.7
47.10	5.91	-0.35	-0.09	5.47	.17	.30	1293	773.0	35.6	-19.5
47.20	4.49	-0.35	-0.09	4.05	.30	.42	1239	773.0	35.3	-19.3
47.30	3.91	-0.34	-0.09	3.48	.36	.48	1214	772.9	35.1	-19.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39647.40	3.33	-0.34	-0.09	2.90	-16.45	-16.57	1179	772.9	34.9	-19.0
47.50	2.68	-0.34	-0.09	2.25	.57	.70	1132	772.9	34.6	-18.8
47.60	2.53	-0.33	-0.09	2.11	.61	.74	1118	772.8	34.4	-18.6
47.70	2.57	-0.33	-0.09	2.15	.61	.74	1120	772.8	34.1	-18.4
39647.80	2.48	-0.33	-0.09	2.07	-16.62	-16.75	1114	772.8	33.9	-18.3
48.00	2.46	-0.32	-0.09	2.04	.62	.75	1114	772.7	33.4	-17.9
48.20	2.80	-0.32	-0.09	2.40	.54	.67	1145	772.7	32.9	-17.5
48.40	2.95	-0.31	-0.09	2.55	.52	.64	1155	772.7	32.5	-17.2
48.60	2.33	-0.31	-0.09	1.93	.65	.78	1106	772.6	32.0	-16.8
48.80	2.03	-0.30	-0.09	1.64	.74	.86	1076	772.6	31.5	-16.4
49.00	1.80	-0.30	-0.09	1.42	.80	.93	1052	772.6	31.0	-16.0
49.20	1.76	-0.29	-0.08	1.38	.82	.95	1048	772.6	30.5	-15.7
49.40	1.72	-0.28	-0.08	1.35	.83	.96	1045	772.6	30.1	-15.3
49.60	1.88	-0.28	-0.08	1.51	.77	.90	1065	772.6	29.6	-14.9
49.80	2.05	-0.27	-0.08	1.69	.72	.85	1085	772.6	29.1	-14.6
50.00	2.28	-0.27	-0.08	1.93	.66	.79	1106	772.6	28.6	-14.2
50.20	1.90	-0.26	-0.08	1.56	.75	.88	1073	772.6	28.1	-13.8
50.40	1.44	-0.26	-0.08	1.10	.91	.04	1020	772.6	27.6	-13.5
50.60	1.19	-0.25	-0.08	.86	-17.02	.15	983	772.6	27.2	-13.1
50.80	1.27	-0.24	-0.08	.95	-16.98	.11	995	772.6	26.7	-12.7
51.00	1.79	-0.24	-0.08	1.47	.80	-16.93	1059	772.7	26.2	-12.3
51.20	1.60	-0.23	-0.08	1.29	.85	.98	1042	772.7	25.7	-12.0
51.40	1.46	-0.23	-0.08	1.15	.90	-17.03	1025	772.8	25.2	-11.6
51.60	1.41	-0.22	-0.08	1.12	.92	.05	1018	772.8	24.7	-11.2
39651.75	1.39	-0.22	-0.08	1.10	-16.93	-17.06	1014	772.8	24.4	-10.9
52.00	1.31	-0.21	-0.07	1.03	.97	.09	1003	772.9	23.8	-10.5
52.25	1.23	-0.20	-0.07	.95	-17.01	.13	991	773.0	23.2	-10.0
52.50	1.15	-0.19	-0.07	.88	.04	.17	979	773.1	22.6	-9.5
52.75	1.14	-0.18	-0.07	.88	.04	.17	980	773.2	21.9	-9.1
53.00	1.13	-0.18	-0.07	.88	.04	.16	983	773.3	21.3	-8.6
53.25	1.12	-0.17	-0.07	.88	.04	.17	982	773.4	20.7	-8.1
53.50	1.11	-0.16	-0.07	.88	.05	.17	981	773.5	20.1	-7.6
53.75	1.09	-0.15	-0.07	.87	.05	.17	980	773.6	19.5	-7.2
54.00	1.08	-0.15	-0.07	.87	.05	.17	982	773.7	18.9	-6.7
54.25	1.05	-0.14	-0.07	.85	.06	.18	979	773.9	18.3	-6.2
54.50	1.04	-0.13	-0.06	.85	.06	.18	980	774.0	17.7	-5.8
54.75	1.04	-0.12	-0.06	.85	.07	.19	979	774.1	17.1	-5.3
55.00	1.03	-0.11	-0.06	.85	.07	.19	979	774.3	16.4	-4.8
55.25	1.07	-0.11	-0.06	.90	.04	.16	991	774.5	15.8	-4.3
55.50	1.09	-0.10	-0.06	.94	.01	.13	999	774.6	15.2	-3.9
55.75	1.30	-0.09	-0.06	1.15	-16.93	.05	1030	774.8	14.6	-3.4
56.00	1.38	-0.08	-0.06	1.24	.89	.01	1042	775.0	14.0	-2.9
56.25	1.42	-0.07	-0.06	1.29	.87	-16.99	1049	775.2	13.4	-2.4
56.50	1.35	-0.07	-0.05	1.23	.90	-17.02	1041	775.4	12.8	-2.0
56.75	1.15	-0.06	-0.05	1.04	.98	.10	1013	775.5	12.1	-1.5
57.00	1.06	-0.05	-0.05	.96	-17.02	.14	1002	775.8	11.5	-1.0
57.25	1.06	-0.04	-0.05	.97	.02	.13	1005	776.0	10.9	-0.5
57.50	1.09	-0.03	-0.05	1.01	.00	.11	1012	776.2	10.3	-0.1
57.75	1.11	-0.02	-0.05	1.03	-16.99	.10	1016	776.4	9.7	0.4
58.00	1.15	-0.01	-0.05	1.09	.96	.08	1024	776.6	9.0	0.9
58.25	1.16	-0.01	-0.05	1.11	.96	.07	1027	776.8	8.4	1.4
58.50	1.19	0.00	-0.04	1.15	.94	.05	1033	777.1	7.8	1.8
58.75	1.19	0.01	-0.04	1.16	.93	.04	1037	777.3	7.2	2.3
59.00	1.22	0.02	-0.04	1.19	.92	.03	1042	777.6	6.5	2.8
59.25	1.23	0.03	-0.04	1.22	.91	.02	1046	777.8	5.9	3.3
59.50	1.26	0.03	-0.04	1.25	.91	.02	1047	778.1	5.3	3.7
59.75	1.24	0.04	-0.04	1.25	.92	.02	1044	778.3	4.7	4.2
60.00	1.25	0.05	-0.04	1.26	.92	.02	1046	778.6	4.0	4.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39660.25	1.28	0.06	-0.04	1.31	-16.90	-17.00	1052	778.9	3.4	5.2
60.50	1.28	0.07	-0.04	1.31	.91	.00	1053	779.1	2.8	5.6
60.75	1.27	0.07	-0.03	1.31	.90	.00	1055	779.4	2.1	6.1
61.00	1.29	0.08	-0.03	1.34	.89	-16.98	1061	779.7	1.5	6.6
61.25	1.29	0.09	-0.03	1.35	.89	.99	1060	780.0	0.9	7.1
61.50	1.30	0.10	-0.03	1.36	.89	.98	1062	780.3	0.2	7.6
61.75	1.28	0.11	-0.03	1.36	.89	.98	1063	780.6	359.6	8.0
62.00	1.29	0.12	-0.03	1.38	.89	.98	1064	780.9	359.0	8.5
62.25	1.28	0.12	-0.03	1.38	.89	.98	1065	781.2	358.3	9.0
62.50	1.29	0.13	-0.03	1.39	.88	.97	1067	781.5	357.7	9.5
62.75	1.28	0.14	-0.02	1.39	.88	.97	1068	781.8	357.0	10.0
63.00	1.29	0.15	-0.02	1.41	.88	.97	1070	782.1	356.4	10.4
63.25	1.30	0.16	-0.02	1.43	.87	.96	1073	782.4	355.7	10.9
63.50	1.29	0.16	-0.02	1.44	.87	.95	1076	782.7	355.1	11.4
63.75	1.30	0.17	-0.02	1.45	.86	.95	1079	783.0	354.4	11.9
64.00	1.28	0.18	-0.02	1.44	.87	.95	1076	783.4	353.8	12.4
64.25	1.29	0.19	-0.02	1.46	.87	.95	1078	783.7	353.1	12.8
64.50	1.29	0.19	-0.02	1.47	.87	.94	1080	784.0	352.5	13.3
64.75	1.27	0.20	-0.01	1.46	.87	.95	1079	784.3	351.8	13.8
65.00	1.27	0.21	-0.01	1.46	.87	.94	1081	784.7	351.2	14.3
65.25	1.27	0.22	-0.01	1.48	.86	.94	1084	785.0	350.5	14.8
65.50	1.24	0.23	-0.01	1.46	.87	.94	1082	785.4	349.8	15.3
65.75	1.25	0.23	-0.01	1.47	.87	.94	1083	785.7	349.2	15.7
66.00	1.25	0.24	-0.01	1.48	.87	.94	1085	786.0	348.5	16.2
66.25	1.27	0.24	-0.01	1.51	.85	.92	1091	786.4	347.8	16.7
66.50	1.34	0.25	-0.01	1.59	.83	.89	1101	786.7	347.2	17.2
39666.60	1.52	0.16	-0.01	1.67	-16.80	-16.87	1109	786.9	346.9	17.4
66.80	1.60	0.16	-0.01	1.76	.78	.84	1119	787.2	346.3	17.8
67.00	1.90	0.17	0.00	2.07	.69	.76	1149	787.4	345.8	18.2
67.20	2.23	0.27	0.00	2.50	.60	.66	1183	787.7	345.3	18.6
67.40	1.82	0.28	0.00	2.10	.69	.74	1153	788.0	344.7	19.0
67.60	1.46	0.28	0.00	1.74	.78	.84	1120	788.3	344.2	19.3
67.80	1.41	0.29	0.00	1.70	.80	.85	1116	788.6	343.6	19.7
68.00	1.40	0.30	0.00	1.70	.79	.85	1118	788.8	343.1	20.1
68.20	1.44	0.30	0.00	1.74	.78	.83	1123	789.1	342.5	20.5
68.40	1.54	0.31	0.00	1.85	.75	.80	1134	789.4	342.0	20.9
68.60	1.39	0.31	0.00	1.71	.79	.84	1121	789.7	341.4	21.3
68.80	1.25	0.32	0.00	1.57	.84	.89	1104	790.0	340.8	21.7
69.00	1.26	0.32	0.00	1.58	.84	.89	1105	790.3	340.3	22.1
69.20	1.29	0.33	0.00	1.62	.83	.87	1111	790.6	339.7	22.5
69.40	1.37	0.34	0.01	1.71	.81	.86	1117	790.9	339.1	22.9
69.60	1.38	0.34	0.01	1.73	.81	.85	1119	791.1	338.6	23.3
69.80	1.35	0.34	0.01	1.70	.81	.85	1118	791.4	338.0	23.6
70.00	1.35	0.35	0.01	1.70	.81	.85	1118	791.7	337.4	24.0
70.20	1.11	0.35	0.01	1.46	.89	.92	1094	792.0	336.9	24.4
70.40	0.94	0.36	0.01	1.31	.93	.97	1079	792.3	336.3	24.8
70.60	0.86	0.36	0.01	1.23	.96	.99	1072	792.6	335.7	25.2
70.80	0.99	0.37	0.01	1.37	.91	.94	1088	792.9	335.1	25.6
71.00	1.24	0.37	0.01	1.62	.84	.87	1114	793.2	334.5	26.0
71.20	1.29	0.38	0.01	1.68	.82	.85	1120	793.4	334.0	26.4
71.40	1.15	0.38	0.01	1.55	.85	.89	1109	793.7	333.4	26.8
71.60	1.08	0.38	0.01	1.48	.88	.90	1103	794.0	332.8	27.2
71.80	1.04	0.39	0.02	1.44	.89	.92	1098	794.3	332.2	27.5
72.00	1.01	0.39	0.02	1.42	.90	.93	1096	794.6	331.6	27.9
72.20	1.11	0.40	0.02	1.52	.87	.90	1106	794.9	331.0	28.3
72.40	1.33	0.40	0.02	1.75	.81	.84	1127	795.2	330.4	28.7
72.60	1.42	0.40	0.02	1.85	.79	.81	1137	795.4	329.8	29.1
72.80	1.33	0.41	0.02	1.76	.81	.83	1129	795.7	329.1	29.5
73.00	1.03	0.41	0.02	1.47	.89	.91	1101	796.0	328.5	29.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39673.20	0.84	0.42	0.02	1.28	-16.96	-16.98	1080	796.3	327.9	30.3
73.40	0.75	0.42	0.02	1.19	.99	-17.01	1069	796.6	327.3	30.6
73.60	0.67	0.43	0.02	1.12	-17.03	.05	1057	796.9	326.7	31.0
39673.75	0.64	0.43	0.02	1.09	-17.05	-17.07	1051	797.1	326.2	31.3
74.00	0.59	0.43	0.02	1.05	.07	.08	1046	797.4	325.4	31.8
74.25	0.57	0.44	0.03	1.03	.08	.09	1044	797.8	324.6	32.3
74.50	0.52	0.44	0.03	.99	.10	.11	1038	798.1	323.8	32.8
74.75	0.46	0.45	0.03	.94	.13	.14	1030	798.5	323.0	33.2
75.00	0.43	0.45	0.03	.92	.13	.14	1028	798.8	322.2	33.7
75.25	0.39	0.46	0.03	.88	.15	.15	1023	799.1	321.3	34.2
75.50	0.36	0.46	0.03	.85	.17	.17	1019	799.5	320.5	34.7
75.75	0.34	0.47	0.03	.84	.17	.18	1017	799.8	319.7	35.2
76.00	0.36	0.47	0.03	.86	.16	.16	1022	800.1	318.8	35.6
76.25	0.37	0.47	0.03	.87	.15	.15	1026	800.5	317.9	36.1
76.50	0.42	0.48	0.03	.93	.12	.11	1038	800.8	317.1	36.6
76.75	0.43	0.48	0.03	.94	.11	.11	1040	801.1	316.2	37.1
77.00	0.39	0.48	0.03	.91	.13	.13	1033	801.4	315.3	37.6
77.25	0.35	0.48	0.03	.87	.16	.16	1024	801.7	314.4	38.0
77.50	0.34	0.49	0.04	.86	.18	.17	1021	802.1	313.5	38.5
77.75	0.33	0.49	0.04	.86	.17	.16	1023	802.4	312.6	39.0
78.00	0.41	0.49	0.04	.94	.13	.11	1039	802.7	311.6	39.5
78.25	0.60	0.50	0.04	1.13	.04	.03	1068	803.0	310.7	39.9
78.50	0.38	0.50	0.04	.92	.14	.12	1037	803.3	309.7	40.4
78.75	0.22	0.50	0.04	.76	.23	.22	1006	803.6	308.7	40.9
79.00	0.13	0.50	0.04	.67	.29	.27	988	803.9	307.7	41.4
79.25	0.07	0.51	0.04	.61	.33	.31	975	804.2	306.7	41.8
79.50	0.03	0.51	0.04	.58	.36	.34	967	804.5	305.7	42.3
79.75	0.01	0.51	0.04	.56	.37	.35	962	804.7	304.6	42.8
80.00	-0.01	0.51	0.04	.54	.39	.37	957	805.0	303.6	43.3
80.25	0.00	0.51	0.04	.56	.38	.35	962	805.3	302.5	43.7
80.50	0.02	0.51	0.04	.57	.37	.35	966	805.6	301.4	44.2
80.75	0.00	0.51	0.04	.56	.38	.35	963	805.8	300.2	44.6
81.00	-0.01	0.51	0.04	.55	.38	.36	961	806.1	299.1	45.1
81.25	-0.02	0.51	0.04	.54	.39	.37	959	806.3	297.9	45.6
81.50	-0.01	0.51	0.04	.54	.40	.37	959	806.6	296.7	46.0
81.75	0.03	0.51	0.04	.59	.36	.33	973	806.8	295.5	46.5
82.00	0.06	0.51	0.04	.62	.33	.30	981	807.1	294.2	46.9
82.25	0.21	0.51	0.05	.77	.23	.20	1015	807.3	292.9	47.4
82.50	0.25	0.51	0.05	.81	.20	.17	1024	807.5	291.6	47.8
82.75	0.25	0.51	0.05	.81	.20	.17	1025	807.8	290.3	48.3
83.00	0.22	0.51	0.05	.78	.22	.18	1020	808.0	288.9	48.7
83.25	0.14	0.51	0.05	.70	.27	.23	1004	808.2	287.5	49.1
83.50	0.09	0.51	0.05	.64	.31	.27	990	808.4	286.0	49.6
83.75	0.07	0.51	0.05	.62	.33	.29	985	808.6	284.5	50.0
84.00	0.08	0.50	0.05	.64	.32	.28	990	808.8	283.0	50.4
84.25	0.12	0.50	0.05	.67	.30	.26	998	809.0	281.4	50.8
84.50	0.13	0.50	0.05	.68	.29	.25	1000	809.2	279.7	51.2
84.75	0.15	0.50	0.05	.70	.28	.24	1006	809.4	278.1	51.6
85.00	0.21	0.49	0.05	.75	.25	.21	1016	809.6	276.3	52.0
85.25	0.22	0.49	0.05	.76	.24	.19	1019	809.8	274.5	52.4
85.50	0.22	0.48	0.05	.75	.24	.20	1017	809.9	272.7	52.8
85.75	0.23	0.48	0.05	.76	.24	.19	1020	810.1	270.8	53.2
86.00	0.20	0.48	0.05	.73	.26	.21	1014	810.3	268.8	53.5
86.25	0.17	0.47	0.05	.69	.28	.24	1006	810.4	266.8	53.9
86.50	0.17	0.46	0.05	.69	.28	.24	1006	810.6	264.7	54.2
86.75	0.26	0.46	0.05	.77	.23	.18	1023	810.7	262.6	54.6
87.00	0.29	0.45	0.05	.79	.21	.16	1029	810.8	260.3	54.9
87.25	0.21	0.44	0.05	.70	.26	.21	1012	811.0	258.0	55.2
87.50	0.19	0.44	0.05	.67	.29	.24	1004	811.1	255.7	55.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39687.75	0.20	0.43	0.05	.68	-17.28	-17.23	1006	811.2	253.2	55.8
88.00	0.23	0.42	0.05	.70	.27	.22	1011	811.3	250.7	56.1
88.25	0.27	0.41	0.05	.73	.25	.20	1018	811.4	248.1	56.3
88.50	0.32	0.40	0.05	.77	.23	.18	1026	811.5	245.5	56.5
88.75	0.37	0.39	0.05	.81	.20	.15	1034	811.6	242.7	56.8
89.00	0.40	0.37	0.05	.83	.19	.14	1038	811.7	240.0	57.0
89.25	0.43	0.36	0.05	.84	.18	.13	1041	811.8	237.1	57.2
89.50	0.45	0.34	0.05	.84	.18	.12	1041	811.9	234.2	57.3
89.75	0.46	0.32	0.05	.83	.18	.13	1040	812.0	231.2	57.5
90.00	0.47	0.30	0.05	.83	.18	.13	1040	812.0	228.3	57.6
90.25	0.51	0.28	0.05	.83	.19	.13	1040	812.1	225.2	57.7
90.50	0.52	0.25	0.05	.82	.19	.14	1038	812.1	222.2	57.8
90.75	0.54	0.22	0.05	.81	.20	.15	1036	812.2	219.1	57.9
91.00	0.58	0.18	0.05	.81	.20	.14	1037	812.2	216.0	57.9
91.25	0.64	0.14	0.05	.83	.19	.13	1040	812.3	213.0	57.9
91.50	0.69	0.09	0.05	.84	.18	.13	1042	812.3	209.9	57.9
91.75	0.74	0.03	0.05	.82	.19	.14	1039	812.3	206.9	57.9
92.00	0.78	0.00	0.05	.83	.18	.13	1041	812.3	203.9	57.8
92.25	0.83	0.00	0.05	.88	.16	.10	1050	812.3	201.0	57.8
92.50	0.87	0.00	0.05	.92	.14	.08	1057	812.3	198.1	57.7
92.75	0.88	0.00	0.05	.93	.13	.08	1059	812.3	195.3	57.6
93.00	0.90	0.00	0.05	.95	.12	.07	1062	812.3	192.5	57.5
93.25	0.91	0.00	0.05	.96	.12	.06	1064	812.3	189.8	57.3
93.50	0.92	0.00	0.05	.96	.12	.06	1063	812.3	187.1	57.2
93.75	0.92	0.00	0.05	.97	.11	.06	1065	812.3	184.6	57.0
94.00	0.97	0.00	0.05	1.02	.09	.03	1073	812.3	182.1	56.8
94.25	1.01	0.00	0.05	1.06	.07	.02	1079	812.2	179.7	56.6
94.50	1.04	0.00	0.05	1.09	.06	.00	1084	812.2	177.3	56.4
39694.60	1.06	0.00	0.05	1.11	-17.05	-16.99	1087	812.2	176.4	56.3
94.80	1.22	0.00	0.05	1.27	-16.98	.92	1109	812.1	174.6	56.1
95.00	1.45	0.00	0.05	1.50	.89	.83	1139	812.1	172.8	55.9
95.20	1.63	0.00	0.05	1.67	.84	.78	1158	812.0	171.1	55.7
95.40	1.38	0.00	0.05	1.43	.92	.86	1131	812.0	169.4	55.5
95.60	1.23	0.00	0.05	1.27	.97	.92	1111	811.9	167.8	55.3
95.80	1.25	0.00	0.05	1.29	.97	.91	1112	811.9	166.2	55.1
96.00	1.25	0.00	0.05	1.30	.96	.91	1114	811.8	164.7	54.9
96.20	1.19	0.00	0.04	1.24	.98	.92	1108	811.7	163.2	54.6
96.40	1.05	0.00	0.04	1.10	-17.03	.98	1090	811.7	161.7	54.4
96.60	1.05	0.00	0.04	1.10	.03	.97	1092	811.6	160.3	54.2
96.80	1.30	0.00	0.04	1.35	-16.93	.88	1124	811.5	158.9	53.9
97.00	1.51	0.00	0.04	1.55	.87	.81	1147	811.4	157.5	53.7
97.20	1.46	0.00	0.04	1.50	.88	.82	1143	811.3	156.2	53.4
97.40	1.29	0.00	0.04	1.33	.93	.88	1123	811.2	154.9	53.2
97.60	1.29	0.00	0.04	1.33	.94	.88	1122	811.2	153.6	52.9
97.80	1.25	0.00	0.04	1.29	.95	.89	1118	811.1	152.4	52.6
98.00	1.27	0.00	0.04	1.31	.94	.89	1120	811.0	151.2	52.4
98.20	1.25	0.00	0.04	1.29	.95	.90	1116	810.9	150.0	52.1
98.40	1.21	0.00	0.04	1.25	.97	.91	1111	810.8	148.8	51.8
98.60	1.16	0.00	0.04	1.20	.98	.93	1106	810.6	147.7	51.5
98.80	1.15	0.00	0.04	1.19	.98	.93	1105	810.5	146.6	51.3
99.00	1.16	0.00	0.04	1.20	.98	.93	1107	810.4	145.5	51.0
99.20	1.37	0.00	0.04	1.41	.90	.85	1133	810.3	144.4	50.7
99.40	1.41	0.00	0.04	1.45	.89	.84	1138	810.2	143.4	50.4
99.60	1.64	0.00	0.04	1.67	.82	.77	1160	810.1	142.4	50.1
99.80	2.16	0.00	0.03	2.20	.69	.65	1207	809.9	141.4	49.8
39700.00	1.77	0.00	0.03	1.81	.77	.73	1177	809.8	140.4	49.5
00.20	1.68	0.00	0.03	1.72	.80	.75	1168	809.7	139.4	49.2
00.40	1.64	0.00	0.03	1.67	.81	.76	1163	809.5	138.5	48.9
00.60	1.56	0.00	0.03	1.60	.83	.79	1155	809.4	137.5	48.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39700.80	1.73	0.00	0.03	1.76	-16.80	-16.76	1166	809.2	136.6	48.3
01.00	1.92	0.00	0.03	1.95	.75	.71	1184	809.1	135.7	48.0
01.20	2.01	0.00	0.03	2.04	.72	.68	1196	808.9	134.8	47.7
01.40	1.93	0.00	0.03	1.96	.73	.68	1192	808.8	133.9	47.4
01.60	1.58	0.00	0.03	1.61	.82	.78	1158	808.6	133.1	47.1
01.80	1.30	0.00	0.03	1.32	.92	.88	1122	808.5	132.2	46.8
02.00	1.26	0.00	0.03	1.29	.94	.90	1116	808.3	131.4	46.5
39702.25	1.24	0.00	0.03	1.27	-16.94	-16.91	1112	808.1	130.3	46.1
02.50	1.20	0.00	0.03	1.23	.96	.92	1107	807.9	129.3	45.7
02.75	1.17	0.00	0.02	1.19	.97	.94	1101	807.7	128.3	45.3
03.00	1.15	0.00	0.02	1.18	.98	.94	1099	807.5	127.3	44.9
03.25	1.14	0.00	0.02	1.17	.98	.95	1097	807.2	126.4	44.5
03.50	1.11	0.00	0.02	1.13	-17.00	.96	1091	807.0	125.4	44.1
03.75	1.10	0.00	0.02	1.13	.00	.96	1091	806.8	124.5	43.7
04.00	1.12	0.00	0.02	1.14	-16.99	.96	1092	806.5	123.6	43.3
04.25	1.13	0.00	0.02	1.15	-17.00	.97	1091	806.3	122.6	42.9
04.50	1.12	0.00	0.02	1.14	.00	.97	1088	806.1	121.7	42.5
04.75	1.10	0.00	0.02	1.12	.01	.98	1084	805.8	120.9	42.1
05.00	1.07	0.00	0.02	1.09	.02	-17.00	1080	805.6	120.0	41.7
05.25	1.07	0.00	0.02	1.08	.03	.00	1077	805.3	119.1	41.3
05.50	1.04	0.00	0.02	1.05	.04	.02	1072	805.1	118.3	40.9
05.75	1.01	0.00	0.02	1.03	.05	.03	1069	804.8	117.4	40.5
06.00	0.96	0.00	0.02	.98	.07	.04	1063	804.6	116.6	40.1
06.25	0.99	0.00	0.02	1.00	.06	.04	1065	804.3	115.8	39.7
39706.40	1.02	0.00	0.02	1.04	-17.04	-17.02	1071	804.1	115.3	39.5
06.60	1.14	0.00	0.02	1.15	-16.99	-16.97	1086	803.9	114.6	39.2
06.80	1.39	0.00	0.02	1.40	.90	.88	1118	803.7	114.0	38.8
07.00	1.51	0.00	0.02	1.52	.86	.84	1131	803.5	113.3	38.5
07.20	1.33	0.00	0.01	1.35	.91	.90	1111	803.3	112.7	38.2
07.40	1.28	0.00	0.01	1.30	.94	.92	1104	803.0	112.1	37.8
07.60	1.22	0.00	0.01	1.23	.96	.95	1093	802.8	111.4	37.5
39707.75	1.11	0.00	0.01	1.12	-17.00	-16.99	1079	802.6	111.0	37.3
08.00	1.08	0.00	0.01	1.09	.01	-17.00	1075	802.4	110.2	36.9
08.25	1.10	0.00	0.01	1.11	.01	.00	1076	802.1	109.4	36.5
08.50	1.09	0.00	0.01	1.11	.01	.00	1076	801.8	108.7	36.0
08.75	1.10	0.00	0.01	1.12	.00	-16.99	1077	801.5	107.9	35.6
09.00	1.11	0.00	0.01	1.13	-16.99	.99	1079	801.2	107.2	35.2
09.25	1.11	0.00	0.01	1.12	.99	.99	1079	800.9	106.4	34.8
09.50	1.12	0.00	0.01	1.13	.99	.98	1080	800.6	105.7	34.4
09.75	1.17	0.00	0.01	1.18	.97	.97	1085	800.3	105.0	34.0
10.00	1.19	0.00	0.01	1.20	.96	.96	1088	800.0	104.2	33.6
10.25	1.20	0.00	0.01	1.21	.95	.95	1092	799.7	103.5	33.2
10.50	0.99	0.00	0.01	1.00	-17.03	-17.03	1062	799.4	102.8	32.8
10.75	0.93	0.00	0.01	.94	.06	.06	1051	799.1	102.1	32.4
11.00	0.90	0.00	0.01	.91	.08	.08	1045	798.8	101.4	31.9
11.25	0.87	0.00	0.01	.88	.09	.10	1038	798.5	100.7	31.5
11.50	0.87	0.00	0.01	.89	.09	.10	1037	798.2	100.0	31.1
11.75	0.91	0.00	0.01	.93	.07	.08	1045	797.9	99.3	30.7
12.00	0.97	0.00	0.01	.98	.04	.05	1053	797.6	98.6	30.3
12.25	1.07	0.00	0.01	1.08	.00	.01	1067	797.3	97.9	29.9
12.50	1.08	0.00	0.01	1.09	-16.99	.00	1070	797.0	97.2	29.5
12.75	1.09	0.00	0.01	1.10	.98	.00	1071	796.7	96.5	29.1
13.00	1.09	0.00	0.01	1.09	.98	.00	1070	796.4	95.9	28.6
13.25	1.10	0.00	0.01	1.10	.98	.00	1071	796.1	95.2	28.2
13.50	1.11	0.00	0.01	1.11	.97	-16.99	1074	795.8	94.5	27.8
13.75	1.19	0.00	0.01	1.20	.93	.95	1085	795.5	93.9	27.4
14.00	1.46	0.00	0.01	1.47	.84	.86	1118	795.2	93.2	27.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39714.25	1.29	0.00	0.01	1.30	-16.89	-16.92	1097	794.9	92.5	26.6
14.50	1.26	0.00	0.01	1.27	.91	.94	1089	794.5	91.9	26.2
14.75	1.15	0.00	0.01	1.16	.96	.99	1072	794.2	91.2	25.8
15.00	1.03	0.00	0.01	1.03	-17.01	-17.04	1054	793.9	90.6	25.3
15.25	1.00	0.00	0.01	1.01	.02	.05	1050	793.6	89.9	24.9
15.50	1.07	0.00	0.01	1.08	-16.99	.02	1059	793.3	89.3	24.5
15.75	1.17	0.00	0.01	1.18	.95	-16.98	1074	793.0	88.6	24.1
16.00	1.20	0.00	0.00	1.21	.93	.96	1080	792.7	88.0	23.7
16.25	1.26	0.00	0.00	1.26	.90	.94	1087	792.4	87.3	23.3
16.50	1.42	0.00	0.00	1.43	.84	.88	1107	792.1	86.7	22.9
16.75	1.34	0.00	0.00	1.34	.88	.91	1094	791.8	86.1	22.5
17.00	1.29	0.00	0.00	1.29	.90	.94	1086	791.5	85.4	22.1
17.25	1.17	0.00	0.00	1.18	.93	.97	1073	791.2	84.8	21.6
17.50	1.14	0.00	0.00	1.14	.95	.99	1066	791.0	84.2	21.2
17.75	1.14	0.00	0.00	1.14	.95	.99	1066	790.7	83.6	20.8
18.00	1.18	0.00	0.00	1.18	.93	.98	1071	790.4	82.9	20.4
18.25	1.26	0.00	0.00	1.26	.90	.95	1080	790.1	82.3	20.0
18.50	1.35	0.00	0.00	1.35	.87	.92	1090	789.8	81.7	19.6
18.75	1.40	0.00	0.00	1.40	.85	.90	1096	789.5	81.1	19.2
19.00	1.48	0.00	0.00	1.48	.82	.87	1106	789.2	80.4	18.8
19.25	1.58	0.00	0.00	1.58	.79	.84	1118	789.0	79.8	18.4
19.50	1.67	0.00	0.00	1.66	.76	.81	1127	788.7	79.2	18.0
19.75	1.76	0.00	0.00	1.76	.73	.78	1137	788.4	78.6	17.5
20.00	1.84	0.00	0.00	1.84	.71	.76	1143	788.2	78.0	17.1
20.25	1.92	0.00	0.00	1.91	.69	.75	1149	787.9	77.4	16.7
20.50	2.01	0.00	0.00	2.01	.66	.72	1159	787.6	76.8	16.3
20.75	2.12	0.00	0.00	2.12	.64	.70	1167	787.4	76.2	15.9
21.00	2.15	0.00	0.00	2.15	.63	.69	1170	787.1	75.6	15.5
21.25	2.07	0.00	0.00	2.07	.64	.70	1163	786.9	74.9	15.1
21.50	2.06	0.00	0.00	2.05	.64	.71	1161	786.6	74.3	14.7
21.75	2.10	0.00	0.00	2.09	.63	.70	1164	786.4	73.7	14.3
22.00	2.14	0.00	0.00	2.14	.62	.69	1169	786.1	73.1	13.9
22.25	2.20	0.00	0.00	2.20	.60	.67	1174	785.9	72.5	13.4
22.50	2.28	0.00	0.00	2.28	.58	.65	1181	785.6	71.9	13.0
22.75	2.36	0.00	0.00	2.35	.57	.63	1187	785.4	71.3	12.6
23.00	2.42	0.00	0.00	2.42	.55	.62	1191	785.2	70.7	12.2
23.25	2.49	0.00	0.00	2.49	.54	.61	1195	784.9	70.1	11.8
23.50	2.53	0.00	0.00	2.52	.54	.61	1196	784.7	69.6	11.4
23.75	2.53	0.00	0.00	2.53	.53	.61	1196	784.5	69.0	11.0
24.00	2.45	0.00	0.00	2.45	.55	.62	1190	784.3	68.4	10.6
24.25	2.38	0.00	0.00	2.38	.56	.63	1185	784.1	67.8	10.2
24.50	2.39	0.00	0.00	2.38	.56	.63	1185	783.9	67.2	9.8
24.75	2.42	0.00	0.00	2.42	.55	.62	1188	783.7	66.6	9.4
25.00	2.63	0.00	0.00	2.63	.51	.58	1202	783.5	66.0	9.0
25.25	2.74	0.00	0.00	2.74	.49	.57	1208	783.3	65.4	8.6
25.50	2.86	0.00	0.00	2.85	.47	.55	1215	783.1	64.8	8.2
25.75	3.00	0.00	0.00	3.00	.45	.53	1223	782.9	64.2	7.7
26.00	3.06	0.00	0.00	3.05	.44	.52	1226	782.8	63.7	7.3
26.25	3.11	0.00	0.00	3.10	.43	.51	1229	782.6	63.1	6.9
26.50	3.15	0.00	0.00	3.14	.42	.50	1232	782.4	62.5	6.5
26.75	3.22	0.00	0.00	3.21	.41	.49	1235	782.3	61.9	6.1
27.00	3.30	0.00	0.00	3.29	.40	.48	1239	782.1	61.3	5.7
27.25	3.45	0.00	0.00	3.45	.38	.46	1248	782.0	60.7	5.3
27.50	3.63	0.00	0.00	3.63	.35	.43	1257	781.8	60.2	4.9
27.75	3.58	0.00	0.00	3.58	.35	.44	1255	781.7	59.6	4.5
28.00	3.77	0.00	0.00	3.77	.33	.42	1264	781.5	59.0	4.1
28.25	3.67	0.00	0.00	3.66	.34	.43	1258	781.4	58.4	3.7
28.50	3.35	0.00	0.00	3.35	.38	.47	1240	781.3	57.9	3.3
28.75	3.38	0.00	0.00	3.38	.38	.47	1240	781.2	57.3	2.9
29.00	3.44	0.00	0.00	3.44	.37	.46	1245	781.1	56.7	2.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39729.25	3.49	0.00	0.00	3.50	-16.36	-16.45	1248	781.0	56.1	2.1
29.50	3.50	0.00	0.00	3.50	.36	.45	1246	780.9	55.5	1.7
29.75	3.45	0.00	0.00	3.46	.37	.46	1243	780.8	55.0	1.3
30.00	3.46	0.00	0.00	3.46	.37	.46	1243	780.7	54.4	0.9
30.25	3.50	0.00	0.00	3.50	.36	.45	1244	780.6	53.8	0.5
30.50	3.54	0.00	0.01	3.55	.35	.45	1246	780.5	53.2	0.1
30.75	3.57	0.00	0.01	3.58	.35	.44	1247	780.5	52.7	-0.3
31.00	3.60	0.00	0.01	3.61	.34	.44	1248	780.4	52.1	-0.7
31.25	3.65	-0.01	0.01	3.65	.34	.43	1250	780.3	51.5	-1.1
31.50	3.71	-0.01	0.01	3.71	.33	.42	1253	780.3	50.9	-1.5
31.75	3.89	-0.02	0.01	3.89	.31	.40	1261	780.3	50.4	-1.9
32.00	4.07	-0.02	0.01	4.06	.29	.38	1269	780.2	49.8	-2.3
32.25	4.30	-0.02	0.01	4.28	.27	.36	1279	780.2	49.2	-2.7
32.50	4.34	-0.02	0.01	4.33	.26	.35	1281	780.2	48.7	-3.1
32.75	4.40	-0.02	0.01	4.39	.25	.34	1283	780.2	48.1	-3.5
33.00	4.46	-0.02	0.01	4.45	.25	.34	1286	780.1	47.5	-3.9
33.25	4.54	-0.02	0.01	4.53	.24	.33	1289	780.1	46.9	-4.3
33.50	4.58	-0.02	0.01	4.58	.23	.32	1291	780.2	46.4	-4.7
33.75	4.59	-0.02	0.01	4.59	.23	.32	1290	780.2	45.8	-5.1
34.00	4.60	-0.02	0.02	4.60	.23	.33	1289	780.2	45.2	-5.5
34.25	4.67	-0.01	0.02	4.68	.22	.32	1292	780.2	44.7	-5.9
34.50	4.79	-0.01	0.02	4.80	.21	.30	1299	780.2	44.1	-6.3
34.75	5.08	-0.01	0.02	5.09	.18	.27	1310	780.3	43.5	-6.7
35.00	4.89	0.00	0.02	4.91	.20	.29	1303	780.3	42.9	-7.1
35.25	4.63	0.00	0.02	4.65	.22	.31	1291	780.4	42.4	-7.5
35.50	4.53	0.01	0.02	4.56	.23	.32	1287	780.4	41.8	-7.9
35.75	4.07	0.01	0.02	4.10	.28	.37	1265	780.5	41.2	-8.3
36.00	3.82	0.02	0.02	3.86	.31	.40	1251	780.6	40.7	-8.7
36.25	3.54	0.02	0.02	3.59	.35	.44	1234	780.7	40.1	-9.1
36.50	3.48	0.03	0.02	3.53	.36	.45	1231	780.8	39.5	-9.5
36.75	3.41	0.03	0.02	3.47	.36	.45	1227	780.8	39.0	-9.9
37.00	3.35	0.04	0.02	3.41	.37	.46	1224	781.0	38.4	-10.3
37.25	3.25	0.04	0.03	3.32	.38	.47	1218	781.1	37.8	-10.7
37.50	3.14	0.05	0.03	3.21	.40	.49	1212	781.2	37.2	-11.1
37.75	3.10	0.05	0.03	3.17	.41	.49	1208	781.3	36.7	-11.5
38.00	3.04	0.05	0.03	3.12	.42	.50	1203	781.4	36.1	-11.9
38.25	2.98	0.06	0.03	3.07	.43	.51	1199	781.6	35.5	-12.3
38.50	2.92	0.07	0.03	3.02	.43	.52	1195	781.7	35.0	-12.7
38.75	2.85	0.07	0.03	2.95	.45	.53	1189	781.9	34.4	-13.1
39.00	2.80	0.08	0.03	2.91	.46	.54	1185	782.0	33.8	-13.5
39.25	2.74	0.08	0.03	2.85	.46	.55	1183	782.2	33.3	-13.9
39.50	2.68	0.09	0.03	2.80	.47	.55	1179	782.4	32.7	-14.3
39.75	2.64	0.10	0.03	2.77	.48	.56	1176	782.6	32.1	-14.7
40.00	2.60	0.10	0.03	2.74	.48	.56	1174	782.7	31.5	-15.1
40.25	2.55	0.11	0.04	2.69	.49	.57	1171	782.9	31.0	-15.5
40.50	2.48	0.11	0.04	2.63	.50	.58	1166	783.2	30.4	-15.9
40.75	2.48	0.12	0.04	2.64	.50	.57	1168	783.4	29.8	-16.3
41.00	2.55	0.13	0.04	2.72	.48	.56	1173	783.6	29.3	-16.7
41.25	2.64	0.13	0.04	2.82	.48	.55	1176	783.8	28.7	-17.1
41.50	2.66	0.14	0.04	2.84	.48	.55	1176	784.0	28.1	-17.5
41.75	2.73	0.15	0.04	2.92	.46	.53	1182	784.3	27.5	-17.9
42.00	2.76	0.15	0.04	2.95	.45	.52	1185	784.5	27.0	-18.3
42.25	2.75	0.16	0.04	2.96	.45	.52	1187	784.8	26.4	-18.7
42.50	2.72	0.17	0.04	2.93	.45	.52	1184	785.0	25.8	-19.0
42.75	2.65	0.17	0.04	2.87	.47	.54	1178	785.3	25.2	-19.4
43.00	2.63	0.18	0.05	2.85	.47	.54	1176	785.6	24.7	-19.8
43.25	2.51	0.19	0.05	2.74	.49	.55	1169	785.9	24.1	-20.2
43.50	2.44	0.19	0.05	2.68	.51	.57	1163	786.2	23.5	-20.6
43.75	2.33	0.20	0.05	2.57	.53	.59	1153	786.5	22.9	-21.0
44.00	2.18	0.21	0.05	2.44	.55	.61	1144	786.8	22.4	-21.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39744.25	2.10	0.21	0.05	2.37	-16.57	-16.63	1138	787.1	21.8	-21.8
44.50	2.07	0.22	0.05	2.34	.57	.63	1136	787.4	21.2	-22.2
44.75	2.06	0.22	0.05	2.33	.58	.63	1135	787.7	20.6	-22.6
45.00	2.04	0.23	0.05	2.32	.58	.63	1134	788.0	20.0	-23.0
45.25	2.03	0.24	0.05	2.33	.58	.63	1134	788.4	19.5	-23.4
45.50	2.04	0.24	0.06	2.34	.58	.63	1134	788.7	18.9	-23.8
45.75	2.05	0.25	0.06	2.36	.57	.62	1136	789.0	18.3	-24.2
46.00	2.03	0.26	0.06	2.34	.58	.62	1135	789.4	17.7	-24.6
46.25	2.18	0.26	0.06	2.50	.55	.59	1147	789.8	17.1	-25.0
46.50	2.38	0.27	0.06	2.71	.50	.55	1164	790.1	16.5	-25.4
46.75	3.03	0.28	0.06	3.37	.40	.45	1203	790.5	16.0	-25.8
47.00	2.60	0.28	0.06	2.94	.47	.51	1178	790.9	15.4	-26.2
47.25	2.44	0.29	0.06	2.79	.50	.54	1166	791.2	14.8	-26.6
47.50	2.19	0.30	0.06	2.55	.54	.58	1148	791.6	14.2	-27.0
47.75	2.10	0.30	0.06	2.46	.56	.59	1143	792.0	13.6	-27.4
48.00	1.78	0.31	0.06	2.16	.61	.65	1121	792.4	13.0	-27.8
48.25	1.84	0.31	0.07	2.22	.60	.64	1126	792.8	12.4	-28.2
48.50	2.05	0.32	0.07	2.43	.57	.60	1140	793.2	11.9	-28.6
48.75	1.95	0.33	0.07	2.35	.59	.62	1131	793.7	11.3	-29.0
49.00	1.89	0.33	0.07	2.30	.60	.63	1126	794.1	10.7	-29.3
49.25	1.88	0.34	0.07	2.29	.60	.62	1128	794.5	10.1	-29.7
49.50	1.70	0.35	0.07	2.12	.64	.66	1114	794.9	9.5	-30.1
49.75	1.64	0.35	0.07	2.07	.65	.67	1108	795.4	8.9	-30.5
50.00	1.64	0.36	0.07	2.06	.66	.67	1107	795.8	8.3	-30.9
50.25	1.60	0.36	0.07	2.03	.67	.68	1103	796.2	7.7	-31.3
50.50	1.53	0.37	0.07	1.97	.68	.70	1097	796.7	7.1	-31.7
50.75	1.42	0.38	0.07	1.87	.71	.72	1087	797.2	6.5	-32.1
51.00	1.39	0.38	0.07	1.85	.72	.73	1085	797.6	5.9	-32.5
51.25	1.44	0.39	0.08	1.90	.71	.72	1089	798.1	5.3	-32.9
51.50	1.70	0.39	0.08	2.17	.65	.66	1110	798.5	4.7	-33.3
51.75	2.07	0.40	0.08	2.54	.58	.58	1138	799.0	4.1	-33.7
52.00	2.19	0.40	0.08	2.68	.55	.55	1149	799.5	3.5	-34.1
52.25	2.35	0.41	0.08	2.84	.52	.52	1159	800.0	2.9	-34.5
52.50	2.05	0.42	0.08	2.54	.58	.57	1140	800.5	2.2	-34.9
52.75	2.12	0.42	0.08	2.62	.57	.56	1143	800.9	1.6	-35.3
53.00	2.22	0.43	0.08	2.73	.55	.54	1150	801.4	1.0	-35.7
53.25	2.29	0.43	0.08	2.80	.54	.53	1155	801.9	0.4	-36.1
53.50	2.28	0.44	0.08	2.80	.54	.52	1157	802.4	359.8	-36.5
53.75	2.31	0.44	0.08	2.84	.52	.51	1161	802.9	359.2	-36.9
54.00	2.56	0.45	0.08	3.10	.49	.47	1176	803.4	358.5	-37.2
54.25	4.31	0.46	0.08	4.85	.29	.27	1258	803.9	357.9	-37.6
54.50	4.11	0.46	0.08	4.65	.30	.28	1251	804.4	357.3	-38.0
54.75	1.69	0.47	0.09	2.24	.63	.61	1123	804.9	356.7	-38.4
55.00	2.17	0.47	0.09	2.73	.55	.52	1155	805.5	356.0	-38.8
55.25	1.58	0.48	0.09	2.15	.66	.63	1112	806.0	355.4	-39.2
55.50	1.44	0.48	0.09	2.01	.71	.68	1094	806.5	354.8	-39.6
55.75	1.30	0.49	0.09	1.88	.75	.72	1080	807.0	354.1	-40.0
56.00	1.22	0.49	0.09	1.80	.77	.73	1073	807.5	353.5	-40.4
56.25	1.16	0.50	0.09	1.75	.79	.75	1066	808.1	352.9	-40.8
56.50	1.14	0.50	0.09	1.73	.79	.76	1064	808.6	352.2	-41.2
56.75	1.18	0.51	0.09	1.78	.78	.74	1069	809.1	351.6	-41.6
57.00	1.28	0.51	0.09	1.88	.76	.72	1077	809.7	350.9	-42.0
57.25	1.34	0.52	0.09	1.95	.75	.71	1082	810.2	350.3	-42.4
57.50	1.49	0.52	0.09	2.10	.72	.67	1094	810.7	349.6	-42.8
57.75	1.56	0.53	0.09	2.18	.70	.65	1101	811.3	349.0	-43.1
58.00	1.55	0.53	0.09	2.17	.70	.65	1102	811.8	348.3	-43.5
58.25	1.47	0.53	0.09	2.10	.72	.66	1096	812.3	347.6	-43.9
58.50	1.46	0.54	0.10	2.09	.72	.67	1094	812.9	347.0	-44.3
58.75	1.46	0.54	0.10	2.10	.72	.67	1094	813.4	346.3	-44.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39759.00	1.51	0.55	0.10	2.16	-16.71	-16.65	1100	813.9	345.6	-45.1
59.25	1.59	0.55	0.10	2.24	.69	.63	1106	814.5	344.9	-45.5
59.50	1.60	0.55	0.10	2.25	.70	.64	1105	815.0	344.3	-45.9
59.75	1.60	0.56	0.10	2.26	.70	.63	1105	815.6	343.6	-46.3
60.00	1.61	0.56	0.10	2.27	.69	.63	1107	816.1	342.9	-46.7
60.25	1.65	0.57	0.10	2.31	.69	.61	1111	816.6	342.2	-47.1
60.50	1.66	0.57	0.10	2.33	.69	.61	1111	817.2	341.5	-47.4
60.75	1.67	0.57	0.10	2.34	.69	.61	1111	817.7	340.8	-47.8
61.00	1.68	0.58	0.10	2.36	.69	.61	1113	818.3	340.1	-48.2
61.25	1.70	0.58	0.10	2.38	.68	.60	1115	818.8	339.4	-48.6
61.50	1.81	0.59	0.10	2.49	.65	.56	1128	819.3	338.6	-49.0
61.75	2.53	0.59	0.10	3.22	.53	.44	1173	819.9	337.9	-49.4
62.00	3.13	0.59	0.10	3.83	.46	.37	1202	820.4	337.2	-49.8
62.25	2.73	0.60	0.10	3.43	.50	.41	1184	820.9	336.5	-50.2
62.50	2.61	0.60	0.10	3.31	.52	.42	1179	821.5	335.7	-50.5
62.75	2.56	0.60	0.10	3.27	.53	.43	1175	822.0	335.0	-50.9
63.00	2.27	0.60	0.10	2.98	.57	.47	1159	822.5	334.2	-51.3
63.25	1.86	0.61	0.10	2.57	.64	.53	1134	823.1	333.4	-51.7
63.50	1.40	0.61	0.10	2.12	.72	.62	1102	823.6	332.7	-52.1
63.75	1.57	0.61	0.10	2.29	.69	.58	1115	824.1	331.9	-52.5
64.00	1.28	0.61	0.10	2.00	.76	.65	1090	824.7	331.1	-52.8
64.25	1.07	0.62	0.10	1.79	.82	.71	1069	825.2	330.3	-53.2
64.50	0.90	0.62	0.10	1.63	.86	.75	1054	825.7	329.5	-53.6
64.75	0.81	0.62	0.10	1.54	.89	.78	1043	826.2	328.7	-54.0
65.00	0.83	0.63	0.10	1.56	.89	.78	1044	826.7	327.9	-54.4
65.25	0.82	0.63	0.10	1.56	.89	.78	1044	827.2	327.1	-54.7
65.50	0.85	0.63	0.11	1.59	.88	.77	1047	827.8	326.3	-55.1
65.75	0.87	0.63	0.11	1.61	.88	.76	1050	828.3	325.4	-55.5
66.00	0.85	0.64	0.11	1.59	.88	.76	1048	828.8	324.6	-55.9
66.25	0.80	0.64	0.11	1.55	.89	.77	1044	829.3	323.7	-56.3
66.50	0.78	0.64	0.11	1.52	.90	.78	1041	829.8	322.8	-56.6
66.75	0.83	0.64	0.11	1.57	.89	.76	1047	830.3	321.9	-57.0
67.00	0.86	0.64	0.11	1.61	.88	.75	1051	830.7	321.0	-57.4
67.25	0.90	0.64	0.10	1.65	.87	.74	1056	831.2	320.1	-57.7
67.50	0.86	0.65	0.10	1.61	.88	.76	1050	831.7	319.2	-58.1
67.75	0.80	0.65	0.10	1.55	.90	.78	1044	832.2	318.2	-58.5
68.00	0.77	0.65	0.10	1.52	.91	.78	1041	832.7	317.3	-58.8
68.25	0.76	0.65	0.10	1.51	.91	.78	1041	833.1	316.3	-59.2
68.50	0.75	0.65	0.10	1.50	.91	.78	1040	833.6	315.3	-59.6
68.75	0.74	0.65	0.10	1.49	.92	.78	1039	834.1	314.3	-59.9
69.00	0.73	0.65	0.10	1.48	.92	.78	1038	834.5	313.3	-60.3
69.25	0.70	0.65	0.10	1.46	.93	.79	1036	835.0	312.2	-60.7
69.50	0.66	0.65	0.10	1.42	.94	.80	1031	835.4	311.2	-61.0
69.75	0.63	0.65	0.10	1.39	.95	.81	1027	835.9	310.1	-61.4
70.00	0.58	0.65	0.10	1.33	.98	.83	1020	836.3	309.0	-61.7
70.25	0.53	0.65	0.10	1.28	.99	.85	1014	836.8	307.8	-62.1
70.50	0.54	0.65	0.10	1.30	.98	.83	1017	837.2	306.7	-62.4
70.75	0.56	0.65	0.10	1.31	.98	.82	1019	837.6	305.5	-62.7
71.00	0.64	0.65	0.10	1.40	.95	.80	1030	838.1	304.3	-63.1
71.25	0.69	0.65	0.10	1.44	.94	.80	1035	838.5	303.0	-63.4
71.50	0.75	0.65	0.10	1.50	.93	.78	1042	838.9	301.8	-63.8
71.75	1.00	0.65	0.10	1.75	.85	.69	1069	839.3	300.4	-64.1
72.00	0.90	0.65	0.10	1.64	.88	.71	1059	839.7	299.1	-64.4
72.25	0.76	0.65	0.10	1.51	.92	.75	1045	840.1	297.7	-64.7
72.50	0.71	0.65	0.10	1.46	.94	.77	1039	840.5	296.3	-65.1
72.75	0.96	0.65	0.10	1.71	.87	.71	1065	840.9	294.9	-65.4
73.00	1.53	0.65	0.10	2.27	.74	.57	1113	841.2	293.4	-65.7
73.25	1.68	0.65	0.10	2.42	.71	.53	1126	841.6	291.8	-66.0
73.50	1.55	0.64	0.10	2.29	.73	.55	1117	842.0	290.2	-66.3
73.75	1.31	0.64	0.10	2.04	.78	.60	1097	842.3	288.6	-66.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39774.00	0.94	0.64	0.10	1.68	-16.87	-16.68	1066	842.7	286.9	-66.8
74.25	0.77	0.64	0.10	1.51	.92	.74	1047	843.0	285.1	-67.1
74.50	0.75	0.64	0.10	1.48	.93	.76	1043	843.4	283.3	-67.4
74.75	0.77	0.63	0.10	1.50	.92	.74	1046	843.7	281.4	-67.6
75.00	0.79	0.63	0.09	1.51	.92	.73	1048	844.0	279.5	-67.9
75.25	0.81	0.63	0.09	1.54	.91	.72	1052	844.4	277.5	-68.1
75.50	0.81	0.63	0.09	1.53	.91	.72	1053	844.7	275.4	-68.4
75.75	0.81	0.63	0.09	1.53	.91	.72	1051	845.0	273.3	-68.6
76.00	0.80	0.62	0.09	1.52	.92	.73	1050	845.3	271.1	-68.8
76.25	0.74	0.62	0.09	1.45	.94	.74	1043	845.6	268.8	-69.0
76.50	0.51	0.62	0.09	1.22	-17.01	.82	1013	845.9	266.4	-69.2
76.75	0.54	0.61	0.09	1.24	.01	.82	1016	846.1	264.0	-69.3
77.00	0.59	0.61	0.09	1.29	-16.99	.80	1023	846.4	261.5	-69.5
77.25	0.66	0.61	0.09	1.36	.97	.78	1032	846.7	258.9	-69.6
77.50	0.70	0.60	0.09	1.39	.96	.77	1036	846.9	256.2	-69.8
77.75	0.73	0.60	0.09	1.42	.95	.76	1040	847.2	253.4	-69.9
78.00	0.80	0.59	0.09	1.48	.93	.73	1048	847.4	250.6	-69.9
78.25	0.80	0.59	0.09	1.48	.93	.73	1048	847.7	247.7	-70.0
78.50	0.75	0.58	0.09	1.42	.95	.76	1040	847.9	244.8	-70.0
78.75	0.67	0.58	0.09	1.34	.98	.79	1031	848.1	241.8	-70.1
79.00	0.64	0.57	0.08	1.30	-17.00	.81	1026	848.3	238.8	-70.1
79.25	0.58	0.57	0.08	1.24	.02	.82	1017	848.6	235.7	-70.0
79.50	0.54	0.57	0.08	1.19	.03	.84	1010	848.8	232.6	-70.0
79.75	0.50	0.56	0.08	1.15	.05	.87	1005	849.0	229.5	-69.9
80.00	0.50	0.55	0.08	1.14	.05	.87	1004	849.1	226.3	-69.8
80.25	0.64	0.55	0.08	1.28	.00	.81	1024	849.3	223.2	-69.7
80.50	0.81	0.54	0.18	1.54	-16.92	.73	1055	849.5	220.1	-69.6
80.75	0.93	0.54	0.08	1.55	.92	.72	1057	849.6	217.0	-69.4
81.00	0.78	0.53	0.08	1.39	.97	.77	1038	849.8	214.0	-69.2
81.25	0.78	0.52	0.08	1.39	.97	.77	1039	849.9	211.0	-69.0
81.50	0.72	0.51	0.08	1.31	.99	.80	1029	850.1	208.0	-68.8
81.75	0.67	0.51	0.08	1.25	-17.01	.82	1021	850.2	205.1	-68.6
82.00	0.49	0.50	0.08	1.07	.08	.89	994	850.3	202.3	-68.3
82.25	0.47	0.49	0.07	1.03	.10	.91	987	850.5	199.5	-68.0
82.50	0.48	0.48	0.07	1.04	.10	.90	989	850.6	196.8	-67.7
82.75	0.53	0.47	0.07	1.07	.08	.90	995	850.7	194.2	-67.4
83.00	0.60	0.46	0.07	1.14	.06	.87	1007	850.8	191.7	-67.0
83.25	0.63	0.45	0.07	1.16	.05	.86	1010	850.8	189.2	-66.7
83.50	0.63	0.44	0.07	1.14	.06	.87	1007	850.9	186.9	-66.3
83.75	0.62	0.43	0.07	1.12	.06	.87	1004	851.0	184.6	-65.9
84.00	0.64	0.42	0.07	1.13	.06	.87	1006	851.1	182.3	-65.5
84.25	0.64	0.40	0.07	1.11	.07	.88	1003	851.1	180.2	-65.1
84.50	0.68	0.39	0.07	1.13	.06	.87	1007	851.2	178.1	-64.7
84.75	0.70	0.38	0.07	1.14	.05	.86	1008	851.2	176.1	-64.3
85.00	0.75	0.36	0.06	1.18	.04	.84	1014	851.2	174.1	-63.9
85.25	0.79	0.34	0.06	1.20	.03	.84	1017	851.2	172.3	-63.4
85.50	0.82	0.33	0.06	1.21	.03	.83	1018	851.3	170.4	-63.0
85.75	0.88	0.31	0.06	1.25	.01	.81	1023	851.3	168.7	-62.5
86.00	0.99	0.29	0.06	1.34	-16.98	.76	1035	851.3	167.0	-62.0
86.25	1.21	0.27	0.06	1.54	.91	.69	1059	851.3	165.3	-61.6
86.50	1.41	0.25	0.06	1.72	.87	.65	1077	851.2	163.7	-61.1
86.75	1.63	0.22	0.06	1.91	.82	.61	1094	851.2	162.1	-60.6
87.00	1.66	0.20	0.06	1.91	.82	.61	1094	851.2	160.6	-60.1
87.25	1.57	0.17	0.06	1.80	.85	.64	1084	851.1	159.2	-59.6
87.50	1.42	0.14	0.05	1.61	.90	.69	1066	851.1	157.7	-59.1
87.75	1.40	0.10	0.05	1.55	.91	.70	1060	851.0	156.3	-58.6
88.00	1.40	0.06	0.05	1.51	.93	.71	1056	851.0	155.0	-58.1
88.25	1.42	0.00	0.05	1.48	.94	.73	1052	850.9	153.7	-57.5
88.50	1.41	0.00	0.05	1.46	.94	.74	1050	850.8	152.4	-57.0
88.75	1.34	0.00	0.05	1.39	.96	.76	1042	850.8	151.1	-56.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39789.00	1.33	0.00	0.05	1.38	-16.97	-16.76	1040	850.7	149.9	-56.0
89.25	1.40	0.00	0.05	1.45	.95	.74	1048	850.6	148.7	-55.5
89.50	1.45	0.00	0.05	1.50	.93	.72	1054	850.5	147.5	-54.9
89.75	1.51	0.00	0.05	1.56	.91	.71	1060	850.4	146.4	-54.4
90.00	1.57	0.00	0.04	1.62	.90	.69	1066	850.2	145.3	-53.8
90.25	1.75	0.00	0.04	1.80	.85	.64	1083	850.1	144.2	-53.3
90.50	1.96	0.00	0.04	2.00	.80	.58	1101	850.0	143.1	-52.8
90.75	2.48	0.00	0.04	2.52	.69	.47	1140	849.8	142.0	-52.2
91.00	2.80	0.00	0.04	2.84	.64	.42	1160	849.7	141.0	-51.7
91.25	2.70	0.00	0.04	2.74	.65	.43	1154	849.5	139.9	-51.1
39791.40	2.80	0.00	0.04	2.84	-16.64	-16.41	1161	849.4	139.3	-50.8
91.60	3.16	0.00	0.04	3.19	.58	.35	1183	849.3	138.5	-50.3
91.80	2.87	0.00	0.04	2.91	.61	.39	1168	849.2	137.8	-49.9
92.00	3.18	0.00	0.04	3.22	.57	.34	1185	849.0	137.0	-49.5
92.20	3.29	0.00	0.03	3.32	.55	.33	1191	848.9	136.2	-49.0
92.40	3.04	0.00	0.03	3.08	.59	.36	1178	848.8	135.4	-48.6
92.60	2.89	0.00	0.03	2.93	.61	.38	1170	848.6	134.7	-48.1
92.80	3.21	0.00	0.03	3.24	.55	.33	1190	848.5	134.0	-47.7
93.00	2.93	0.00	0.03	2.96	.59	.37	1175	848.3	133.2	-47.2
93.20	2.82	0.00	0.03	2.85	.62	.40	1165	848.1	132.5	-46.8
93.40	2.85	0.00	0.03	2.88	.61	.39	1168	848.0	131.8	-46.3
93.60	2.11	0.00	0.03	2.14	.75	.53	1118	847.8	131.1	-45.9
93.80	1.98	0.00	0.03	2.01	.79	.57	1103	847.6	130.4	-45.4
39794.00	1.96	0.00	0.03	1.99	-16.80	-16.58	1100	847.4	129.7	-45.0
94.25	1.98	0.00	0.03	2.01	.79	.58	1100	847.2	128.8	-44.4
94.50	2.05	0.00	0.03	2.08	.78	.57	1105	847.0	127.9	-43.9
94.75	2.14	0.00	0.02	2.16	.76	.55	1113	846.8	127.1	-43.3
95.00	2.06	0.00	0.02	2.08	.77	.56	1107	846.5	126.3	-42.7
95.25	2.09	0.00	0.02	2.11	.77	.57	1106	846.3	125.4	-42.2
95.50	2.06	0.00	0.02	2.09	.78	.58	1104	846.0	124.6	-41.6
95.75	2.06	0.00	0.02	2.08	.78	.59	1103	845.8	123.8	-41.0
96.00	2.04	0.00	0.02	2.06	.79	.59	1101	845.5	123.0	-40.4
96.25	2.07	0.00	0.02	2.09	.78	.57	1105	845.2	122.2	-39.9
96.50	2.17	0.00	0.02	2.19	.75	.55	1112	845.0	121.4	-39.3
96.75	2.15	0.00	0.02	2.17	.76	.56	1110	844.7	120.7	-38.7
97.00	2.34	0.00	0.02	2.36	.72	.52	1124	844.4	119.9	-38.2
97.25	2.39	0.00	0.02	2.40	.71	.51	1128	844.1	119.1	-37.6
97.50	2.17	0.00	0.02	2.19	.75	.55	1112	843.8	118.3	-37.0
97.75	2.14	0.00	0.01	2.15	.75	.55	1112	843.5	117.6	-36.5
98.00	2.34	0.00	0.01	2.36	.70	.50	1130	843.2	116.8	-35.9
98.25	2.22	0.00	0.01	2.23	.73	.53	1119	842.9	116.1	-35.3
98.50	1.94	0.00	0.01	1.95	.80	.60	1094	842.6	115.4	-34.7
98.75	1.88	0.00	0.01	1.90	.81	.62	1088	842.3	114.6	-34.2
99.00	1.80	0.00	0.01	1.81	.84	.65	1079	842.0	113.9	-33.6
99.25	1.72	0.00	0.01	1.73	.86	.67	1072	841.7	113.2	-33.0
99.50	1.70	0.00	0.01	1.71	.85	.67	1072	841.4	112.4	-32.4
99.75	1.72	0.00	0.01	1.73	.85	.67	1073	841.0	111.7	-31.9
39800.00	1.76	0.00	0.01	1.77	.84	.66	1076	840.7	111.0	-31.3
00.25	1.60	0.00	0.01	1.62	.88	.70	1060	840.4	110.3	-30.7
00.50	1.54	0.00	0.01	1.55	.91	.73	1052	840.1	109.6	-30.2
00.75	1.36	0.00	0.01	1.37	.96	.79	1032	839.7	108.9	-29.6
01.00	1.30	0.00	0.01	1.32	.98	.81	1025	839.4	108.2	-29.0
01.25	1.28	0.00	0.01	1.29	.99	.82	1021	839.1	107.5	-28.4
01.50	1.25	0.00	0.01	1.26	-17.00	.83	1017	838.7	106.8	-27.9
01.75	1.31	0.00	0.01	1.32	-16.98	.81	1025	838.4	106.1	-27.3
02.00	1.37	0.00	0.01	1.38	.96	.80	1032	838.0	105.4	-26.7
02.25	1.49	0.00	0.01	1.50	.91	.75	1047	837.7	104.7	-26.1
02.50	1.56	0.00	0.01	1.57	.89	.72	1056	837.3	104.1	-25.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39802.75	1.66	0.00	0.01	1.69	-16.86	-16.69	1067	837.0	103.4	-25.0
03.00	1.80	0.00	0.01	1.81	.82	.65	1080	836.6	102.7	-24.4
03.25	1.60	0.00	0.01	1.62	.86	.70	1063	836.3	102.0	-23.9
03.50	1.57	0.00	0.01	1.59	.88	.72	1057	835.9	101.4	-23.3
03.75	1.58	0.00	0.01	1.59	.88	.72	1057	835.6	100.7	-22.7
04.00	1.52	0.00	0.01	1.53	.89	.73	1051	835.2	100.0	-22.2
04.25	1.49	0.00	0.01	1.50	.91	.76	1046	834.9	99.4	-21.6
04.50	1.42	0.00	0.01	1.43	.93	.79	1037	834.5	98.7	-21.0
04.75	1.40	0.00	0.01	1.41	.94	.79	1035	834.2	98.1	-20.5
05.00	1.41	0.00	0.01	1.42	.93	.78	1037	833.8	97.4	-19.9
05.25	1.42	0.00	0.01	1.43	.92	.78	1038	833.5	96.7	-19.3
05.50	1.42	0.00	0.01	1.43	.92	.78	1039	833.1	96.1	-18.8
05.75	1.44	0.00	0.01	1.45	.91	.77	1041	832.7	95.4	-18.2
06.00	1.55	0.00	0.01	1.56	.86	.72	1058	832.4	94.8	-17.6
06.25	1.89	0.00	0.01	1.90	.76	.61	1094	832.0	94.1	-17.1
06.50	1.78	0.00	0.01	1.80	.79	.64	1085	831.7	93.5	-16.5
06.75	1.80	0.00	0.01	1.81	.79	.64	1086	831.3	92.8	-15.9
07.00	2.08	0.00	0.01	2.09	.72	.58	1109	831.0	92.2	-15.4
07.25	1.87	0.00	0.01	1.89	.76	.61	1095	830.6	91.6	-14.8
07.50	1.74	0.00	0.01	1.76	.79	.65	1083	830.3	90.9	-14.2
07.75	1.86	0.00	0.01	1.87	.76	.62	1092	829.9	90.3	-13.7
08.00	1.91	0.00	0.01	1.93	.74	.61	1099	829.6	89.6	-13.1
08.25	1.85	0.00	0.01	1.86	.76	.62	1094	829.2	89.0	-12.5
08.50	1.78	0.00	0.01	1.80	.77	.64	1088	828.9	88.4	-12.0
08.75	1.69	0.00	0.01	1.71	.80	.66	1079	828.5	87.7	-11.4
09.00	1.71	0.00	0.02	1.73	.79	.66	1080	828.2	87.1	-10.8
09.25	1.76	0.00	0.02	1.77	.79	.66	1082	827.8	86.5	-10.3
09.50	1.86	0.00	0.02	1.88	.76	.63	1091	827.5	85.8	-9.7
09.75	2.25	0.00	0.02	2.27	.67	.54	1124	827.2	85.2	-9.1
10.00	2.55	0.00	0.02	2.56	.60	.48	1147	826.8	84.6	-8.6
10.25	2.48	0.00	0.02	2.50	.61	.49	1144	826.5	84.0	-8.0
10.50	2.47	0.00	0.02	2.48	.62	.49	1142	826.2	83.3	-7.5
10.75	2.49	0.00	0.02	2.51	.61	.49	1143	825.8	82.7	-6.9
11.00	2.57	0.00	0.02	2.59	.60	.48	1148	825.5	82.1	-6.3
11.25	2.67	0.00	0.02	2.69	.58	.47	1153	825.2	81.4	-5.8
11.50	2.75	0.00	0.02	2.77	.57	.46	1156	824.9	80.8	-5.2
11.75	2.82	0.00	0.02	2.84	.56	.45	1160	824.6	80.2	-4.7
12.00	2.90	0.00	0.02	2.92	.55	.43	1166	824.3	79.6	-4.1
12.25	2.98	0.00	0.02	3.00	.53	.42	1172	823.9	78.9	-3.5
12.50	3.07	0.00	0.02	3.09	.51	.40	1178	823.6	78.3	-3.0
12.75	3.20	0.00	0.02	3.22	.49	.39	1184	823.3	77.7	-2.4
13.00	3.29	0.00	0.02	3.31	.48	.37	1189	823.0	77.1	-1.8
13.25	3.38	0.00	0.02	3.39	.47	.36	1194	822.7	76.5	-1.3
13.50	3.46	0.00	0.02	3.48	.45	.35	1200	822.5	75.8	-0.7
13.75	3.55	0.00	0.02	3.56	.44	.34	1204	822.2	75.2	-0.2
14.00	3.60	0.00	0.02	3.62	.43	.33	1207	821.9	74.6	0.4
14.25	3.62	0.00	0.02	3.64	.43	.33	1209	821.6	74.0	0.9
14.50	3.54	0.00	0.02	3.55	.43	.34	1205	821.3	73.4	1.5
14.75	3.48	0.00	0.02	3.50	.44	.34	1203	821.1	72.8	2.1
15.00	3.47	0.00	0.02	3.49	.44	.34	1202	820.8	72.1	2.6
15.25	3.42	0.00	0.02	3.44	.45	.35	1200	820.5	71.5	3.2
15.50	3.43	0.00	0.02	3.45	.44	.35	1201	820.3	70.9	3.7
15.75	3.46	0.00	0.02	3.48	.44	.34	1204	820.0	70.3	4.3
16.00	3.83	0.00	0.02	3.85	.38	.29	1224	819.8	69.7	4.8
16.25	4.39	0.00	0.02	4.41	.32	.23	1250	819.5	69.1	5.4
16.50	4.66	0.00	0.02	4.68	.29	.20	1263	819.3	68.4	5.9
16.75	4.50	0.00	0.02	4.52	.30	.21	1257	819.1	67.8	6.5
17.00	4.25	0.00	0.02	4.27	.33	.25	1244	818.9	67.2	7.1
17.25	4.01	0.00	0.02	4.03	.36	.27	1233	818.6	66.6	7.6
17.50	3.87	0.00	0.02	3.90	.37	.29	1228	818.4	66.0	8.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39817.75	3.85	0.00	0.02	3.87	-16.37	-16.29	1227	818.2	65.4	8.7
18.00	4.08	0.00	0.02	4.11	.35	.26	1238	818.0	64.8	9.2
18.25	4.53	0.00	0.02	4.55	.30	.21	1259	817.8	64.2	9.8
18.50	4.54	0.00	0.02	4.56	.29	.21	1261	817.6	63.5	10.3
18.75	4.40	0.00	0.02	4.42	.31	.23	1254	817.4	62.9	10.9
19.00	4.35	0.00	0.02	4.38	.31	.23	1252	817.2	62.3	11.4
19.25	4.19	0.00	0.02	4.21	.33	.25	1245	817.1	61.7	12.0
19.50	4.03	0.00	0.02	4.05	.35	.27	1236	816.9	61.1	12.5
19.75	3.98	0.00	0.02	4.01	.35	.28	1235	816.7	60.5	13.1
20.00	3.94	0.00	0.02	3.96	.36	.28	1234	816.6	59.9	13.6
20.25	3.81	0.00	0.03	3.84	.37	.29	1229	816.4	59.3	14.1
20.50	3.48	0.00	0.03	3.51	.41	.34	1212	816.3	58.6	14.7
20.75	3.40	0.00	0.03	3.43	.42	.35	1207	816.1	58.0	15.2
21.00	3.54	0.00	0.03	3.56	.40	.33	1215	816.0	57.4	15.8
21.25	3.64	0.00	0.03	3.67	.39	.32	1221	815.9	56.8	16.3
21.50	3.76	0.00	0.03	3.79	.37	.30	1227	815.8	56.2	16.8
21.75	3.80	0.00	0.03	3.82	.37	.30	1228	815.6	55.6	17.4
22.00	3.85	0.00	0.03	3.87	.36	.29	1231	815.5	55.0	17.9
22.25	3.93	0.00	0.03	3.96	.35	.28	1237	815.4	54.4	18.4
22.50	4.12	0.00	0.03	4.15	.33	.26	1246	815.3	53.8	19.0
22.75	3.82	0.00	0.03	3.85	.36	.29	1232	815.3	53.1	19.5
23.00	3.42	0.00	0.03	3.45	.41	.34	1212	815.2	52.5	20.1
23.25	3.13	0.00	0.03	3.16	.44	.38	1198	815.1	51.9	20.6
23.50	3.09	0.00	0.03	3.12	.45	.38	1197	815.0	51.3	21.1
23.75	3.13	0.00	0.03	3.16	.44	.38	1199	815.0	50.7	21.7
24.00	3.14	0.02	0.03	3.19	.45	.38	1198	814.9	50.1	22.2
24.25	3.14	0.03	0.03	3.21	.45	.38	1197	814.9	49.5	22.7
24.50	3.14	0.05	0.03	3.22	.44	.38	1199	814.8	48.9	23.3
24.75	3.17	0.07	0.03	3.28	.44	.37	1202	814.8	48.2	23.8
25.00	3.18	0.09	0.03	3.30	.43	.37	1204	814.8	47.6	24.3
25.25	3.29	0.10	0.03	3.42	.41	.35	1212	814.8	47.0	24.9
25.50	3.50	0.12	0.03	3.65	.38	.32	1225	814.7	46.4	25.4
25.75	3.79	0.13	0.03	3.95	.35	.28	1239	814.7	45.8	25.9
26.00	4.03	0.14	0.04	4.21	.32	.25	1251	814.7	45.2	26.5
26.25	3.45	0.16	0.04	3.64	.38	.32	1226	814.8	44.6	27.0
26.50	2.62	0.17	0.04	2.62	.50	.43	1178	814.8	43.9	27.5
26.75	2.48	0.18	0.04	2.70	.53	.46	1167	814.8	43.3	28.1
27.00	2.43	0.19	0.04	2.66	.54	.48	1162	814.8	42.7	28.6
27.25	2.39	0.20	0.04	2.63	.55	.49	1159	814.9	42.1	29.1
27.50	2.34	0.21	0.04	2.59	.56	.49	1156	814.9	41.5	29.7
27.75	2.28	0.22	0.04	2.54	.56	.50	1154	815.0	40.9	30.2
28.00	2.22	0.23	0.04	2.49	.57	.51	1151	815.0	40.2	30.7
28.25	2.18	0.25	0.04	2.47	.58	.51	1149	815.1	39.6	31.2
28.50	2.11	0.25	0.04	2.40	.60	.53	1142	815.1	39.0	31.8
28.75	2.07	0.26	0.04	2.38	.61	.54	1138	815.2	38.4	32.3
29.00	2.11	0.27	0.04	2.43	.60	.53	1141	815.3	37.8	32.8
29.25	2.12	0.28	0.04	2.45	.59	.53	1143	815.4	37.1	33.3
29.50	2.05	0.29	0.04	2.39	.61	.54	1139	815.5	36.5	33.9
29.75	2.05	0.30	0.04	2.40	.60	.54	1140	815.6	35.9	34.4
30.00	2.09	0.31	0.04	2.44	.59	.52	1147	815.7	35.3	34.9
30.25	2.32	0.32	0.04	2.68	.54	.47	1165	815.8	34.7	35.4
30.50	2.31	0.33	0.05	2.69	.55	.48	1164	816.0	34.0	36.0
30.75	2.35	0.34	0.05	2.73	.54	.47	1167	816.1	33.4	36.5
31.00	2.40	0.34	0.05	2.79	.53	.46	1172	816.2	32.8	37.0
31.25	2.28	0.35	0.05	2.68	.55	.47	1165	816.4	32.2	37.5
31.50	2.17	0.36	0.05	2.58	.56	.49	1159	816.5	31.5	38.1
31.75	2.08	0.37	0.05	2.49	.58	.51	1153	816.7	30.9	38.6
32.00	1.96	0.37	0.05	2.38	.60	.53	1144	816.9	30.3	39.1
32.25	1.92	0.38	0.05	2.36	.61	.53	1142	817.0	29.7	39.6
32.50	1.90	0.39	0.05	2.34	.61	.53	1141	817.2	29.0	40.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39832.75	1.90	0.40	0.05	2.35	-16.61	-16.53	1142	817.4	28.4	40.6
33.00	2.10	0.41	0.05	2.55	.57	.50	1157	817.6	27.8	41.2
33.25	1.79	0.41	0.05	2.25	.63	.55	1134	817.8	27.2	41.7
33.50	1.61	0.42	0.05	2.08	.67	.60	1116	818.0	26.5	42.2
33.75	1.66	0.43	0.05	2.14	.66	.59	1121	818.2	25.9	42.7
34.00	1.69	0.43	0.05	2.18	.65	.57	1126	818.4	25.3	43.2
34.25	1.71	0.44	0.05	2.21	.65	.57	1128	818.7	24.6	43.7
34.50	1.62	0.45	0.06	2.12	.67	.59	1120	818.9	24.0	44.2
34.75	1.52	0.46	0.06	2.04	.69	.61	1111	819.1	23.4	44.8
35.00	1.46	0.46	0.06	1.98	.71	.63	1104	819.4	22.7	45.3
35.25	1.38	0.47	0.06	1.91	.72	.64	1097	819.6	22.1	45.8
35.50	1.30	0.47	0.06	1.83	.75	.66	1089	819.9	21.5	46.3
35.75	1.35	0.48	0.06	1.89	.74	.65	1093	820.1	20.8	46.8
36.00	1.41	0.49	0.06	1.96	.72	.64	1100	820.4	20.2	47.3
36.25	1.61	0.49	0.06	2.16	.68	.59	1119	820.7	19.5	47.8
36.50	1.63	0.50	0.06	2.19	.67	.58	1123	821.0	18.9	48.3
36.75	1.68	0.51	0.06	2.24	.66	.57	1126	821.2	18.3	48.8
37.00	1.67	0.51	0.06	2.25	.66	.57	1128	821.5	17.6	49.4
37.25	1.67	0.52	0.06	2.26	.66	.57	1129	821.8	17.0	49.8
37.50	1.69	0.52	0.06	2.28	.65	.56	1130	822.1	16.3	50.3
37.75	1.70	0.53	0.06	2.30	.65	.56	1131	822.4	15.7	50.9
38.00	1.71	0.54	0.07	2.31	.65	.56	1132	822.7	15.0	51.4
38.25	1.66	0.54	0.07	2.28	.66	.56	1130	823.0	14.4	51.9
38.50	1.69	0.55	0.07	2.31	.65	.56	1132	823.4	13.7	52.4
38.75	1.73	0.56	0.07	2.36	.64	.55	1136	823.7	13.1	52.9
39.00	1.95	0.56	0.07	2.58	.61	.51	1152	824.0	12.4	53.4
39.25	2.20	0.57	0.07	2.83	.56	.47	1172	824.3	11.8	53.9
39.50	2.34	0.57	0.07	2.98	.54	.44	1183	824.7	11.1	54.4
39.75	2.51	0.58	0.07	3.16	.52	.42	1193	825.0	10.5	54.9
40.00	2.74	0.58	0.07	3.39	.49	.38	1208	825.4	9.8	55.4
40.25	2.82	0.59	0.07	3.48	.47	.37	1214	825.7	9.1	55.9
40.50	2.81	0.59	0.07	3.47	.48	.37	1213	826.1	8.5	56.4
40.75	2.86	0.60	0.07	3.53	.47	.36	1216	826.4	7.8	56.9
41.00	2.97	0.60	0.07	3.65	.46	.35	1223	826.8	7.1	57.4
41.25	3.12	0.61	0.07	3.80	.44	.33	1232	827.2	6.5	57.9
41.50	3.26	0.61	0.07	3.94	.42	.31	1242	827.5	5.8	58.4
41.75	3.36	0.62	0.07	4.05	.41	.29	1248	827.9	5.1	58.9
42.00	3.45	0.62	0.07	4.15	.40	.29	1251	828.3	4.5	59.4
42.25	3.61	0.62	0.07	4.31	.38	.27	1260	828.7	3.8	59.9
42.50	3.81	0.63	0.07	4.51	.36	.24	1272	829.1	3.1	60.4
42.75	3.92	0.63	0.07	4.63	.35	.23	1279	829.5	2.4	60.9
43.00	3.93	0.64	0.08	4.64	.35	.23	1279	829.8	1.8	61.4
43.25	3.86	0.64	0.08	4.57	.36	.23	1276	830.2	1.1	61.9
43.50	3.82	0.64	0.08	4.54	.36	.24	1275	830.6	0.4	62.4
43.75	3.94	0.65	0.08	4.67	.35	.22	1282	831.0	359.7	62.9
44.00	4.70	0.65	0.08	5.43	.28	.15	1316	831.5	359.0	63.3
44.25	4.23	0.66	0.08	4.96	.32	.19	1298	831.9	358.3	63.8
44.50	3.71	0.66	0.08	4.45	.37	.24	1274	832.3	357.6	64.3
44.75	2.91	0.66	0.08	3.65	.46	.32	1234	832.7	356.9	64.8
45.00	2.81	0.66	0.08	3.55	.47	.34	1227	833.1	356.2	65.3
45.25	2.69	0.67	0.08	3.44	.49	.36	1218	833.5	355.5	65.8
45.50	2.66	0.67	0.08	3.41	.50	.36	1216	833.9	354.8	66.3
45.75	2.53	0.67	0.08	3.28	.52	.38	1209	834.4	354.1	66.8
46.00	2.54	0.68	0.08	3.30	.52	.38	1210	834.8	353.4	67.3
46.25	2.32	0.68	0.08	3.08	.55	.41	1194	835.2	352.7	67.8
46.50	2.06	0.68	0.00	2.75	.60	.46	1171	835.6	352.0	68.2
46.75	1.92	0.69	0.08	2.69	.61	.47	1167	836.1	351.2	68.7
47.00	1.97	0.69	0.08	2.75	.60	.46	1172	836.5	350.5	69.2
47.25	2.18	0.69	0.08	2.96	.57	.42	1188	836.9	349.8	69.7
47.50	2.03	0.69	0.08	2.80	.60	.45	1176	837.4	349.1	70.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39847.75	1.88	0.70	0.08	2.66	-16.62	-16.48	1164	837.8	346.3	70.7
48.00	1.73	0.70	0.08	2.52	.65	.50	1153	838.2	347.6	71.2
48.25	1.56	0.70	0.08	2.34	.68	.54	1136	838.7	346.8	71.6
48.50	1.37	0.70	0.08	2.16	.72	.58	1119	839.1	346.1	72.1
48.75	1.26	0.71	0.08	2.04	.75	.61	1108	839.6	345.3	72.6
49.00	1.14	0.71	0.08	1.93	.77	.63	1096	840.0	344.6	73.1
49.25	1.05	0.71	0.08	1.84	.79	.65	1086	840.4	343.8	73.6
49.50	0.99	0.71	0.08	1.78	.81	.67	1079	840.9	343.0	74.0
49.75	1.13	0.71	0.08	1.92	.77	.64	1097	841.3	342.3	74.5
50.00	1.16	0.71	0.08	1.96	.76	.63	1102	841.8	341.5	75.0
50.25	1.21	0.72	0.08	2.01	.75	.61	1107	842.2	340.7	75.5
50.50	1.27	0.72	0.08	2.07	.74	.60	1113	842.6	339.9	75.9
50.75	1.26	0.72	0.08	2.06	.74	.60	1112	843.1	339.1	76.4
51.00	1.41	0.72	0.08	2.21	.71	.57	1128	843.5	338.3	76.9
51.25	1.29	0.72	0.08	2.09	.74	.59	1116	844.0	337.5	77.4
51.50	1.14	0.72	0.08	1.95	.77	.62	1101	844.4	336.7	77.8
51.75	1.14	0.72	0.08	1.95	.77	.61	1101	844.8	335.9	78.3
52.00	1.14	0.72	0.08	1.95	.77	.61	1102	845.3	335.1	78.8
52.25	0.79	0.72	0.08	1.60	.85	.70	1058	845.7	334.2	79.2
52.50	0.84	0.72	0.08	1.64	.84	.69	1064	846.2	333.4	79.7
52.75	0.91	0.72	0.08	1.71	.83	.67	1074	846.6	332.5	80.2
53.00	1.05	0.72	0.08	1.86	.79	.63	1093	847.0	331.7	80.6
53.25	1.26	0.72	0.08	2.07	.74	.58	1117	847.5	330.8	81.1
53.50	0.88	0.72	0.08	1.69	.83	.67	1071	847.9	329.9	81.5
53.75	0.65	0.72	0.08	1.46	.89	.74	1038	848.3	329.0	82.0
54.00	0.58	0.72	0.08	1.38	.92	.76	1025	848.8	328.1	82.5
54.25	0.58	0.72	0.08	1.38	.92	.76	1025	849.2	327.2	82.9
54.50	1.05	0.72	0.08	1.85	.79	.63	1094	849.6	326.3	83.4
54.75	1.42	0.72	0.08	2.22	.71	.55	1135	850.0	325.4	83.8
55.00	1.45	0.72	0.08	2.24	.71	.54	1138	850.5	324.4	84.3
55.25	1.83	0.71	0.08	2.62	.64	.47	1173	850.9	323.5	84.7
55.50	1.96	0.71	0.08	2.75	.62	.44	1184	851.3	322.5	85.2
55.75	1.83	0.71	0.08	2.62	.64	.46	1174	851.7	321.5	85.6
56.00	1.67	0.71	0.08	2.47	.67	.48	1162	852.1	320.5	86.1
56.25	1.52	0.71	0.08	2.31	.70	.51	1147	852.5	319.5	86.5
56.50	1.38	0.71	0.08	2.16	.73	.55	1132	852.9	318.5	86.9
56.75	1.22	0.71	0.08	2.01	.76	.58	1117	853.3	317.4	87.4
57.00	1.05	0.71	0.08	1.83	.80	.63	1096	853.8	316.4	87.8
57.25	1.00	0.71	0.08	1.78	.81	.64	1091	854.2	315.3	88.2
57.50	1.10	0.70	0.08	1.88	.79	.60	1103	854.5	314.2	88.7
57.75	1.35	0.70	0.08	2.13	.73	.54	1131	854.9	313.1	89.1
58.00	1.23	0.70	0.08	2.01	.76	.57	1118	855.3	311.9	89.5
58.25	0.96	0.70	0.07	1.73	.82	.64	1084	855.7	310.8	90.0
58.50	0.72	0.69	0.07	1.49	.89	.71	1049	856.1	309.6	90.4
58.75	0.55	0.69	0.07	1.31	.94	.77	1019	856.5	308.4	90.8
59.00	0.48	0.69	0.07	1.24	.96	.80	1006	856.9	307.1	91.2
59.25	0.48	0.69	0.07	1.24	.97	.79	1005	857.2	305.8	91.6
59.50	0.48	0.68	0.07	1.24	.97	.79	1006	857.6	304.5	92.0
59.75	0.63	0.68	0.07	1.38	.92	.75	1034	858.0	303.2	92.4
60.00	0.77	0.68	0.07	1.52	.88	.70	1057	858.3	301.8	92.8
60.25	0.90	0.67	0.07	1.64	.85	.66	1075	858.7	300.4	93.2
60.50	0.89	0.67	0.07	1.64	.85	.66	1076	859.0	299.0	93.6
60.75	0.86	0.67	0.07	1.60	.86	.67	1070	859.4	297.5	94.0
61.00	0.90	0.66	0.07	1.63	.85	.66	1075	859.7	296.0	94.4
61.25	0.98	0.66	0.07	1.71	.83	.64	1087	860.0	294.4	94.7
61.50	1.12	0.66	0.07	1.84	.80	.60	1105	860.4	292.8	95.1
61.75	1.13	0.65	0.07	1.85	.79	.60	1107	860.7	291.2	95.5
62.00	1.09	0.65	0.07	1.81	.80	.61	1102	861.0	289.5	95.8
62.25	0.88	0.64	0.07	1.59	.86	.66	1071	861.3	287.7	96.2
62.50	0.71	0.64	0.06	1.41	.91	.71	1042	861.6	285.9	96.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39862.75	0.75	0.63	0.06	1.45	-16.90	-16.70	1050	862.0	284.0	96.8
63.00	0.79	0.63	0.06	1.48	.89	.70	1056	862.3	282.1	97.1
63.25	0.87	0.63	0.06	1.56	.87	.67	1069	862.6	280.1	97.4
63.50	0.91	0.62	0.06	1.59	.86	.66	1074	862.8	278.1	97.7
63.75	0.97	0.62	0.06	1.65	.84	.64	1083	863.1	275.9	98.0
64.00	0.92	0.61	0.06	1.60	.86	.65	1076	863.4	273.7	98.3
64.25	0.88	0.61	0.06	1.54	.87	.68	1068	863.7	271.5	98.6
64.50	0.75	0.60	0.06	1.41	.91	.72	1047	863.9	269.1	98.8
64.75	0.75	0.60	0.06	1.40	.92	.72	1046	864.2	266.7	99.1
65.00	0.80	0.59	0.06	1.45	.90	.70	1055	864.5	264.2	99.3
65.25	0.85	0.59	0.06	1.50	.89	.68	1063	864.7	261.6	99.5
65.50	0.91	0.58	0.06	1.54	.88	.67	1070	865.0	258.9	99.7
65.75	0.94	0.57	0.05	1.57	.87	.66	1076	865.2	256.2	99.8
66.00	0.95	0.57	0.05	1.58	.86	.66	1078	865.4	253.4	100.0
66.25	1.01	0.56	0.05	1.62	.85	.65	1085	865.6	250.5	100.1
66.50	1.10	0.56	0.05	1.71	.83	.63	1100	865.9	247.6	100.2
66.75	1.42	0.55	0.05	2.02	.76	.55	1139	866.1	244.6	100.3
67.00	1.56	0.55	0.05	2.16	.73	.51	1154	866.3	241.5	100.4
67.25	1.34	0.54	0.05	1.92	.78	.57	1127	866.5	238.4	100.4
67.50	1.26	0.53	0.05	1.84	.80	.59	1118	866.7	235.3	100.5
67.75	1.30	0.52	0.05	1.87	.79	.58	1122	866.8	232.2	100.5
68.00	1.33	0.52	0.05	1.89	.79	.57	1125	867.0	229.0	100.4
68.25	1.16	0.51	0.04	1.72	.83	.61	1103	867.2	225.8	100.4
68.50	1.07	0.50	0.04	1.62	.85	.64	1089	867.4	222.7	100.3
68.75	1.04	0.49	0.04	1.57	.87	.66	1083	867.5	219.5	100.2
69.00	1.16	0.49	0.04	1.69	.84	.63	1102	867.7	216.4	100.1
69.25	1.21	0.48	0.04	1.73	.83	.61	1107	867.8	213.3	100.0
69.50	1.17	0.47	0.04	1.68	.84	.63	1100	867.9	210.3	99.8
69.75	1.01	0.46	0.04	1.51	.88	.68	1076	868.1	207.3	99.6
70.00	0.90	0.45	0.04	1.39	.92	.71	1055	868.2	204.4	99.4
70.25	0.91	0.45	0.04	1.39	.92	.71	1055	868.3	201.6	99.2
70.50	0.90	0.44	0.04	1.38	.92	.72	1055	868.4	198.8	98.9
70.75	0.91	0.43	0.03	1.37	.93	.72	1054	868.5	196.1	98.7
71.00	0.94	0.42	0.03	1.39	.92	.71	1057	868.6	193.5	98.4
71.25	0.88	0.42	0.03	1.32	.95	.73	1044	868.7	191.0	98.1
71.50	0.85	0.41	0.03	1.29	.95	.75	1040	868.8	188.5	97.8
71.75	0.83	0.40	0.03	1.26	.96	.76	1035	868.8	186.1	97.5
72.00	0.91	0.39	0.03	1.33	.94	.73	1048	868.9	183.8	97.1
72.25	0.90	0.38	0.03	1.31	.95	.74	1045	868.9	181.6	96.8
72.50	0.97	0.38	0.03	1.37	.93	.72	1057	869.0	179.4	96.4
72.75	0.87	0.36	0.03	1.26	.97	.76	1037	869.0	177.3	96.0
73.00	0.84	0.36	0.02	1.22	.98	.78	1030	869.0	175.3	95.6
73.25	0.81	0.35	0.02	1.18	.99	.79	1021	869.1	173.3	95.2
73.50	0.78	0.34	0.02	1.13	-17.01	.81	1011	869.1	171.5	94.8
73.75	0.75	0.33	0.02	1.10	.02	.83	1006	869.1	169.6	94.4
74.00	0.74	0.32	0.02	1.08	.03	.84	1004	869.1	167.8	94.0
74.25	0.72	0.31	0.02	1.05	.04	.86	998	869.1	166.1	93.6
74.50	0.75	0.30	0.02	1.07	.04	.84	1001	869.1	164.4	93.1
74.75	0.79	0.29	0.02	1.10	.03	.83	1008	869.0	162.8	92.7
75.00	0.92	0.28	0.02	1.22	-16.98	.78	1034	869.0	161.2	92.2
75.25	0.83	0.27	0.01	1.12	-17.02	.82	1012	869.0	159.7	91.7
75.50	0.77	0.26	0.01	1.05	.05	.85	996	868.9	158.2	91.3
75.75	0.73	0.25	0.01	.99	.07	.87	982	868.9	156.8	90.8
76.00	0.72	0.24	0.01	.98	.08	.88	982	868.8	155.4	90.3
76.25	0.71	0.23	0.01	.96	.08	.90	979	868.7	154.0	89.9
76.50	0.73	0.22	0.01	.97	.08	.89	981	868.6	152.7	89.4
76.75	0.73	0.22	0.01	.95	.09	.90	975	868.6	151.4	88.9
77.00	0.71	0.21	0.01	.92	.10	.92	968	868.5	150.1	88.4
77.25	0.70	0.20	0.01	.90	.11	.93	964	868.4	148.8	87.9
77.50	0.72	0.19	0.00	.91	.11	.92	967	868.2	147.6	87.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39877.75	0.72	0.18	0.00	.91	-17.11	-16.92	967	868.1	146.4	86.9
78.00	0.72	0.17	0.00	.89	.12	.93	961	868.0	145.3	86.4
78.25	0.72	0.16	0.00	.88	.13	.94	959	867.9	144.1	85.9
78.50	0.73	0.15	0.00	.88	.13	.94	960	867.7	143.0	85.4
78.75	0.75	0.14	0.00	.89	.12	.94	964	867.6	141.9	84.8
79.00	0.79	0.13	0.00	.92	.11	.92	971	867.4	140.8	84.3
79.25	0.85	0.12	0.00	.97	.09	.89	984	867.3	139.8	83.8
79.50	0.86	0.11	0.00	.97	.09	.90	986	867.1	138.7	83.3
79.75	0.85	0.10	-0.01	.95	.10	.90	980	866.9	137.7	82.8
80.00	0.89	0.09	-0.01	.98	.09	.89	967	866.8	136.7	82.2
80.25	0.93	0.08	-0.01	1.00	.08	.88	994	866.6	135.7	81.7
80.50	0.92	0.07	-0.01	.99	.08	.89	994	866.4	134.7	81.2
80.75	0.97	0.07	-0.01	1.03	.06	.87	1004	866.2	133.8	80.6
81.00	1.01	0.06	-0.01	1.05	.06	.86	1008	866.0	132.8	80.1
81.25	1.01	0.05	-0.01	1.05	.06	.86	1007	865.7	131.9	79.6
81.50	1.05	0.04	-0.01	1.08	.05	.85	1013	865.5	131.0	79.0
81.75	1.19	0.03	-0.01	1.20	.00	.79	1037	865.3	130.1	78.5
82.00	1.26	0.02	-0.01	1.27	-16.98	.76	1050	865.0	129.2	77.9
82.25	1.21	0.01	-0.01	1.21	-17.00	.79	1040	864.8	128.3	77.4
82.50	1.19	0.00	-0.02	1.17	.01	.81	1032	864.6	127.4	76.8
82.75	1.23	0.00	-0.02	1.21	.00	.79	1040	864.3	126.6	76.3
83.00	1.39	-0.01	-0.02	1.36	-16.95	.74	1067	864.0	125.7	75.8
83.25	1.56	-0.02	-0.02	1.52	.90	.68	1092	863.8	124.9	75.2
83.50	1.45	-0.03	-0.02	1.40	.94	.72	1074	863.5	124.0	74.7
83.75	1.32	-0.04	-0.02	1.26	.98	.77	1050	863.2	123.2	74.1
84.00	1.35	-0.04	-0.02	1.29	.97	.75	1056	863.0	122.4	73.6
84.25	1.63	-0.05	-0.02	1.56	.89	.65	1099	862.7	121.6	73.0
84.50	1.70	-0.05	-0.02	1.62	.87	.64	1107	862.4	120.7	72.4
84.75	1.66	-0.06	-0.02	1.58	.89	.66	1101	862.1	120.0	71.9
85.00	1.55	-0.07	-0.02	1.46	.92	.69	1085	861.8	119.2	71.3
85.25	1.58	-0.07	-0.03	1.48	.91	.67	1090	861.5	118.4	70.8
85.50	1.67	-0.08	-0.03	1.57	.88	.65	1103	861.2	117.6	70.2
85.75	1.73	-0.08	-0.03	1.63	.87	.64	1110	860.8	116.8	69.7
86.00	1.84	-0.08	-0.03	1.73	.84	.62	1122	860.5	116.1	69.1
86.25	1.90	-0.09	-0.03	1.78	.83	.60	1129	860.2	115.3	68.5
86.50	1.79	-0.09	-0.03	1.67	.85	.62	1117	859.9	114.6	68.0
86.75	1.69	-0.09	-0.03	1.57	.88	.65	1103	859.5	113.8	67.4
87.00	1.64	-0.09	-0.03	1.51	.90	.68	1094	859.2	113.1	66.9
87.25	1.87	-0.09	-0.03	1.75	.84	.61	1125	858.8	112.3	66.3
87.50	2.25	-0.09	-0.03	2.13	.75	.52	1167	858.5	111.6	65.7
87.75	2.46	-0.09	-0.03	2.34	.70	.47	1187	858.1	110.9	65.2
88.00	2.60	-0.09	-0.03	2.48	.68	.45	1199	857.8	110.1	64.6
88.25	2.75	-0.09	-0.03	2.63	.65	.42	1213	857.4	109.4	64.0
88.50	2.68	-0.08	-0.04	2.57	.65	.43	1209	857.1	108.7	63.5
88.75	2.72	-0.08	-0.04	2.60	.65	.42	1212	856.7	108.0	62.9
89.00	2.99	-0.07	-0.04	2.88	.60	.37	1234	856.3	107.3	62.3
89.25	3.39	-0.06	-0.04	3.29	.54	.31	1260	856.0	106.6	61.7
89.50	3.07	-0.06	-0.04	2.98	.58	.36	1239	855.6	105.9	61.2
89.75	2.91	-0.05	-0.04	2.82	.61	.38	1228	855.2	105.2	60.6
90.00	2.79	-0.04	-0.04	2.71	.62	.40	1221	854.8	104.5	60.0
90.25	2.85	-0.02	-0.04	2.78	.61	.39	1226	854.5	103.8	59.5
90.50	3.40	-0.01	-0.04	3.35	.52	.30	1264	854.1	103.1	58.9
90.75	3.15	0.00	-0.04	3.11	.56	.34	1249	853.7	102.4	58.3
91.00	2.85	0.00	-0.04	2.80	.61	.39	1224	853.3	101.8	57.7
91.25	2.54	0.00	-0.04	2.50	.67	.45	1199	852.9	101.1	57.2
91.50	2.41	0.00	-0.05	2.37	.69	.48	1189	852.5	100.4	56.6
91.75	2.38	0.00	-0.05	2.33	.69	.48	1187	852.2	99.7	56.0
92.00	2.41	0.00	-0.05	2.36	.68	.47	1190	851.8	99.1	55.4
92.25	2.45	0.00	-0.05	2.40	.68	.47	1192	851.4	98.4	54.9
92.50	2.41	0.00	-0.05	2.36	.69	.49	1186	851.0	97.7	54.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39892.75	2.28	0.00	-0.05	2.23	-16.72	-16.52	1174	850.6	97.1	53.7
93.00	2.27	0.00	-0.05	2.22	.72	.52	1173	850.2	96.4	53.1
93.25	2.23	0.00	-0.05	2.18	.73	.53	1169	849.8	95.8	52.6
93.50	2.07	0.00	-0.05	2.02	.76	.57	1155	849.4	95.1	52.0
93.75	2.22	0.00	-0.05	2.17	.73	.54	1168	849.0	94.5	51.4
94.00	2.61	0.00	-0.05	2.56	.65	.46	1201	848.6	93.8	50.8
94.25	2.77	0.00	-0.05	2.72	.62	.42	1215	848.2	93.2	50.3
94.50	2.61	0.00	-0.05	2.55	.64	.45	1203	847.8	92.5	49.7
94.75	2.41	0.00	-0.06	2.36	.68	.49	1187	847.4	91.9	49.1
95.00	2.79	0.00	-0.06	2.74	.61	.42	1215	847.0	91.2	48.5
95.25	3.05	0.00	-0.06	2.99	.57	.38	1233	846.6	90.6	48.0
95.50	2.59	0.00	-0.06	2.53	.64	.45	1202	846.2	90.0	47.4
95.75	2.43	0.00	-0.06	2.37	.67	.48	1188	845.8	89.3	46.8
96.00	2.47	0.00	-0.06	2.41	.66	.48	1190	845.4	88.7	46.2
96.25	2.70	0.00	-0.06	2.64	.62	.44	1208	845.0	88.1	45.7
96.50	2.55	0.00	-0.06	2.49	.64	.46	1198	844.6	87.4	45.1
39896.80	2.68	0.00	-0.06	2.62	-16.62	-16.43	1209	844.1	86.7	44.4
97.00	3.20	0.00	-0.06	3.14	.53	.34	1247	843.8	86.2	43.9
97.20	4.02	0.00	-0.06	3.96	.42	.23	1294	843.5	85.7	43.4
97.40	3.91	0.00	-0.06	3.85	.43	.24	1290	843.2	85.2	43.0
97.60	3.69	0.00	-0.06	3.63	.45	.27	1279	842.9	84.7	42.5
97.80	2.69	0.00	-0.06	2.63	.59	.41	1215	842.5	84.2	42.1
39898.00	1.51	0.00	-0.06	1.45	-16.86	-16.68	1105	842.2	83.7	41.6
98.25	2.71	0.00	-0.06	2.65	.59	.42	1214	841.8	83.1	41.0
98.50	2.86	0.00	-0.06	2.80	.57	.40	1224	841.5	82.4	40.4
98.75	1.72	0.00	-0.06	1.66	.80	.63	1126	841.1	81.8	39.8
99.00	0.80	0.00	-0.06	.74	-17.15	.98	974	840.7	81.2	39.3
99.25	2.17	0.00	-0.06	2.11	-16.70	.53	1168	840.3	80.6	38.7
99.50	2.59	0.00	-0.06	2.53	.61	.44	1204	839.9	80.0	38.1
99.75	2.58	0.00	-0.06	2.51	.60	.43	1207	839.5	79.4	37.5
39900.00	1.91	0.00	-0.06	1.85	.74	.57	1150	839.2	78.8	36.9
00.25	1.62	0.00	-0.06	1.56	.82	.66	1115	838.8	78.2	36.3
00.50	1.81	0.00	-0.06	1.75	.77	.61	1135	838.4	77.5	35.8
00.75	1.88	0.00	-0.06	1.82	.76	.60	1142	838.1	76.9	35.2
01.00	2.06	0.00	-0.06	2.00	.71	.55	1158	837.7	76.3	34.6
01.25	2.14	0.00	-0.06	2.08	.69	.53	1166	837.3	75.7	34.0
01.50	2.34	0.00	-0.06	2.28	.64	.48	1186	837.0	75.1	33.4
01.75	2.60	0.00	-0.06	2.54	.58	.42	1210	836.6	74.5	32.8
02.00	2.34	0.00	-0.06	2.28	.63	.47	1190	836.3	73.9	32.2
02.25	2.15	0.00	-0.06	2.09	.67	.52	1172	835.9	73.3	31.7
02.50	2.10	0.00	-0.06	2.04	.68	.53	1166	835.6	72.7	31.1
02.75	2.12	0.00	-0.06	2.06	.67	.52	1169	835.2	72.1	30.5
03.00	2.15	0.00	-0.06	2.09	.67	.51	1173	834.9	71.5	29.9
03.25	2.29	0.00	-0.06	2.24	.64	.49	1184	834.5	70.9	29.3
03.50	2.35	0.00	-0.06	2.29	.62	.47	1188	834.2	70.3	28.7
03.75	2.44	0.00	-0.06	2.38	.60	.45	1196	833.9	69.7	28.1
04.00	2.47	0.00	-0.06	2.41	.59	.45	1199	833.5	69.1	27.6
04.25	2.61	0.00	-0.06	2.56	.57	.42	1209	833.2	68.5	27.0
04.50	2.72	0.00	-0.06	2.67	.55	.40	1217	832.9	67.9	26.4
39904.80	2.95	0.00	-0.06	2.90	-16.50	-16.36	1234	832.5	67.2	25.7
05.00	2.97	0.00	-0.06	2.91	.50	.36	1235	832.3	66.8	25.2
05.20	2.63	0.00	-0.06	2.57	.56	.41	1212	832.1	66.3	24.8
05.40	2.58	0.00	-0.06	2.53	.56	.42	1208	831.8	65.8	24.3
05.60	2.56	0.00	-0.06	2.50	.57	.43	1204	831.6	65.3	23.8
05.80	2.56	0.00	-0.06	2.51	.58	.44	1202	831.3	64.9	23.3
06.00	2.57	0.00	-0.06	2.51	.58	.45	1199	831.1	64.4	22.9
06.20	2.65	0.00	-0.05	2.60	.56	.43	1206	830.9	63.9	22.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39906.40	2.71	0.00	-0.05	2.66	-16.54	-16.41	1213	830.7	63.4	21.9
06.60	3.33	0.00	-0.05	3.27	.44	.30	1257	830.5	63.0	21.5
06.80	3.96	0.00	-0.05	3.91	.35	.22	1293	830.2	62.5	21.0
07.00	3.47	0.00	-0.05	3.41	.42	.28	1265	830.0	62.0	20.5
07.20	3.24	0.00	-0.05	3.19	.44	.31	1253	829.8	61.6	20.1
07.40	3.18	0.00	-0.05	3.13	.45	.32	1249	829.6	61.1	19.6
39907.50	3.20	0.00	-0.05	3.15	-16.45	-16.32	1250	829.5	60.9	19.4
07.75	3.25	0.00	-0.05	3.20	.44	.32	1251	829.3	60.3	18.8
08.00	3.26	0.00	-0.05	3.21	.44	.31	1252	829.0	59.7	18.2
08.25	3.26	0.00	-0.05	3.21	.44	.31	1253	828.8	59.1	17.6
08.50	3.30	0.00	-0.05	3.25	.43	.30	1255	828.6	58.5	17.0
08.75	3.32	0.00	-0.05	3.28	.43	.30	1256	828.4	57.9	16.4
39909.00	3.40	-0.10	-0.05	3.25	-16.43	-16.31	1252	828.1	57.3	15.8
09.20	3.37	-0.11	-0.05	3.21	.44	.32	1247	828.0	56.9	15.4
09.40	3.38	-0.12	-0.05	3.21	.44	.32	1248	827.8	56.4	14.9
09.60	3.42	-0.13	-0.05	3.24	.43	.31	1251	827.7	55.9	14.4
09.80	3.49	-0.14	-0.05	3.30	.42	.30	1255	827.5	55.5	14.0
10.00	3.53	-0.15	-0.04	3.34	.41	.29	1258	827.4	55.0	13.5
10.20	3.63	-0.15	-0.04	3.43	.40	.28	1264	827.2	54.5	13.0
10.40	3.73	-0.15	-0.04	3.53	.38	.26	1270	827.1	54.1	12.6
10.60	3.80	-0.16	-0.04	3.60	.37	.25	1274	827.0	53.6	12.1
10.80	3.88	-0.16	-0.04	3.68	.36	.24	1277	826.8	53.1	11.6
11.00	4.00	-0.16	-0.04	3.79	.35	.23	1281	826.7	52.7	11.1
11.20	4.25	-0.16	-0.04	4.04	.33	.21	1292	826.6	52.2	10.7
11.40	4.30	-0.16	-0.04	4.09	.32	.20	1295	826.5	51.7	10.2
11.60	4.44	-0.16	-0.04	4.23	.30	.18	1302	826.4	51.3	9.7
11.80	4.54	-0.17	-0.04	4.34	.29	.17	1308	826.3	50.8	9.3
12.00	4.62	-0.17	-0.04	4.42	.28	.16	1313	826.2	50.3	8.8
12.20	4.65	-0.16	-0.04	4.45	.27	.16	1314	826.1	49.9	8.3
12.40	4.70	-0.16	-0.04	4.51	.27	.15	1317	826.0	49.4	7.8
12.60	4.77	-0.16	-0.04	4.58	.26	.14	1319	826.0	48.9	7.4
12.80	4.83	-0.16	-0.03	4.63	.25	.14	1322	825.9	48.5	6.9
13.00	4.88	-0.16	-0.03	4.69	.24	.13	1326	825.8	48.0	6.4
13.20	4.95	-0.15	-0.03	4.77	.23	.11	1332	825.8	47.5	6.0
13.40	5.03	-0.15	-0.03	4.85	.22	.11	1334	825.7	47.1	5.5
13.60	5.07	-0.15	-0.03	4.89	.22	.11	1334	825.7	46.6	5.0
13.80	5.27	-0.15	-0.03	5.09	.20	.09	1343	825.7	46.2	4.5
14.00	5.38	-0.14	-0.03	5.21	.19	.07	1350	825.6	45.7	4.1
14.20	5.49	-0.14	-0.03	5.33	.17	.06	1356	825.6	45.2	3.6
14.40	5.62	-0.14	-0.03	5.45	.16	.05	1360	825.6	44.8	3.1
14.60	5.81	-0.13	-0.03	5.65	.15	.04	1366	825.6	44.3	2.7
14.80	6.29	-0.13	-0.02	6.13	.11	.00	1384	825.6	43.8	2.2
15.00	7.39	-0.12	-0.02	7.24	.03	-15.92	1421	825.6	43.4	1.7
15.20	7.28	-0.12	-0.02	7.14	.04	.93	1418	825.6	42.9	1.2
15.40	5.10	-0.12	-0.02	4.96	.20	-16.09	1341	825.6	42.4	0.8
15.60	4.40	-0.11	-0.02	4.27	.27	.16	1310	825.6	42.0	0.3
15.80	4.62	-0.11	-0.02	4.49	.25	.14	1318	825.6	41.5	-0.2
16.00	4.70	-0.10	-0.02	4.58	.24	.13	1321	825.7	41.0	-0.6
16.20	4.68	-0.10	-0.02	4.57	.24	.13	1320	825.7	40.6	-1.1
16.40	4.67	-0.09	-0.02	4.57	.24	.13	1320	825.7	40.1	-1.6
16.60	4.93	-0.08	-0.02	4.83	.22	.11	1330	825.8	39.6	-2.1
16.80	4.86	-0.08	-0.01	4.77	.23	.11	1328	825.9	39.2	-2.5
17.00	4.86	-0.07	-0.01	4.77	.23	.11	1326	826.0	38.7	-3.0
17.20	4.52	-0.07	-0.01	4.44	.27	.15	1310	826.1	38.2	-3.5
17.40	4.63	-0.06	-0.01	4.56	.25	.13	1316	826.1	37.8	-4.0
17.60	4.60	-0.06	-0.01	4.53	.25	.13	1316	826.2	37.3	-4.4
17.80	4.42	-0.05	-0.01	4.36	.27	.15	1307	826.3	36.8	-4.9
18.00	4.40	-0.04	-0.01	4.35	.27	.15	1307	826.4	36.4	-5.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39918.20	4.44	-0.04	-0.01	4.40	-16.27	-16.15	1309	826.5	35.9	-5.8
18.40	4.66	-0.03	-0.01	4.63	.25	.13	1318	826.7	35.4	-6.3
18.60	4.99	-0.02	0.00	4.96	.21	.10	1332	826.8	35.0	-6.8
18.80	5.35	-0.02	0.00	5.33	.18	.06	1347	826.9	34.5	-7.3
19.00	5.06	-0.01	0.00	5.05	.20	.08	1337	827.1	34.0	-7.7
19.20	4.92	0.00	0.00	4.91	.22	.10	1331	827.2	33.6	-8.2
19.40	4.83	0.00	0.00	4.83	.23	.11	1325	827.4	33.1	-8.7
19.60	4.74	0.01	0.00	4.75	.24	.11	1321	827.5	32.6	-9.2
19.80	4.64	0.02	0.00	4.66	.25	.12	1316	827.7	32.2	-9.6
20.00	4.64	0.03	0.00	4.67	.25	.12	1317	827.9	31.7	-10.1
20.20	4.50	0.03	0.00	4.53	.26	.13	1312	828.1	31.2	-10.6
20.40	4.25	0.04	0.01	4.30	.28	.16	1301	828.2	30.8	-11.1
20.60	4.10	0.05	0.01	4.15	.30	.17	1293	828.5	30.3	-11.5
20.80	3.95	0.05	0.01	4.01	.32	.19	1287	828.7	29.8	-12.0
21.00	3.71	0.06	0.01	3.78	.35	.22	1275	828.9	29.3	-12.5
21.20	3.44	0.07	0.01	3.52	.38	.25	1260	829.1	28.9	-12.9
21.40	3.24	0.07	0.01	3.33	.41	.28	1247	829.3	28.4	-13.4
21.60	3.15	0.08	0.01	3.24	.43	.30	1240	829.6	27.9	-13.9
21.80	3.08	0.09	0.01	3.18	.44	.31	1236	829.8	27.5	-14.4
22.00	3.01	0.09	0.01	3.12	.45	.31	1233	830.0	27.0	-14.8
22.20	2.94	0.10	0.02	3.06	.45	.32	1230	830.3	26.5	-15.3
22.40	2.87	0.11	0.02	3.00	.47	.33	1226	830.6	26.0	-15.8
22.60	2.89	0.11	0.02	3.02	.47	.33	1226	830.8	25.6	-16.3
22.80	2.78	0.12	0.02	2.93	.48	.34	1219	831.1	25.1	-16.7
23.00	2.63	0.13	0.02	2.77	.51	.37	1208	831.4	24.6	-17.2
23.20	2.46	0.14	0.02	2.62	.53	.39	1199	831.7	24.1	-17.7
23.40	2.28	0.14	0.02	2.44	.57	.42	1186	832.0	23.7	-18.2
23.60	2.18	0.15	0.02	2.36	.59	.44	1179	832.2	23.2	-18.6
23.80	2.11	0.16	0.03	2.29	.61	.46	1172	832.5	22.7	-19.1
24.00	2.02	0.16	0.03	2.21	.62	.47	1166	832.9	22.2	-19.6
24.20	1.91	0.17	0.03	2.10	.64	.49	1158	833.2	21.8	-20.1
24.40	1.95	0.18	0.03	2.16	.63	.48	1162	833.5	21.3	-20.5
24.60	1.92	0.18	0.03	2.14	.64	.49	1159	833.8	20.8	-21.0
24.80	1.90	0.19	0.03	2.12	.65	.50	1155	834.1	20.3	-21.5
25.00	1.99	0.20	0.03	2.22	.63	.48	1163	834.5	19.8	-22.0
25.20	1.97	0.20	0.03	2.21	.63	.47	1166	834.8	19.4	-22.4
25.40	2.05	0.21	0.04	2.30	.60	.44	1175	835.2	18.9	-22.9
25.60	2.09	0.22	0.04	2.34	.60	.44	1176	835.5	18.4	-23.4
25.80	2.11	0.22	0.04	2.37	.60	.44	1178	835.9	17.9	-23.9
26.00	2.06	0.23	0.04	2.33	.60	.44	1175	836.2	17.4	-24.3
26.20	1.98	0.24	0.04	2.25	.63	.46	1167	836.6	16.9	-24.8
26.40	1.88	0.24	0.04	2.17	.64	.48	1161	837.0	16.5	-25.3
26.60	1.82	0.25	0.04	2.11	.65	.49	1157	837.3	16.0	-25.8
26.80	1.73	0.25	0.04	2.03	.68	.51	1147	837.7	15.5	-26.2
39927.00	1.75	0.26	0.04	2.06	-16.68	-16.51	1149	838.1	15.0	-26.7
27.50	1.74	0.26	0.05	2.05	.68	.51	1148	839.1	13.8	-27.9
28.00	1.70	0.29	0.05	2.04	.68	.51	1148	840.1	12.6	-29.1
28.50	1.66	0.31	0.05	2.02	.70	.51	1144	841.1	11.3	-30.3
29.00	1.68	0.32	0.05	2.05	.69	.51	1146	842.2	10.1	-31.5
29.50	1.67	0.34	0.06	2.06	.69	.50	1149	843.2	8.8	-32.7
30.00	1.68	0.36	0.06	2.09	.68	.48	1153	844.3	7.6	-33.9
30.50	1.67	0.37	0.06	2.10	.68	.48	1153	845.4	6.3	-35.0
31.00	1.60	0.39	0.06	2.05	.70	.49	1148	846.5	5.1	-36.2
31.50	1.53	0.40	0.07	2.00	.72	.51	1142	847.7	3.8	-37.4
32.00	1.44	0.42	0.07	1.92	.74	.53	1134	848.8	2.5	-38.6
32.50	1.32	0.43	0.07	1.83	.77	.55	1122	849.9	1.2	-39.8
33.00	1.18	0.44	0.07	1.69	.81	.59	1107	851.1	359.9	-41.0
33.50	1.01	0.46	0.07	1.54	.86	.63	1091	852.3	358.6	-42.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39943.50	1.36	0.63	0.10	2.09	-16.79	-16.48	1137	875.9	328.0	-65.5
44.00	1.36	0.63	0.10	2.09	.79	.48	1137	877.0	326.0	-66.6
44.50	1.35	0.63	0.10	2.08	.79	.48	1136	878.1	324.1	-67.7
45.00	1.41	0.64	0.10	2.15	.78	.47	1142	879.2	322.0	-68.9
45.50	1.43	0.64	0.10	2.17	.78	.46	1144	880.4	319.9	-70.0
46.00	1.45	0.64	0.10	2.20	.77	.45	1147	881.5	317.7	-71.1
46.50	1.42	0.64	0.10	2.16	.78	.47	1143	882.5	315.3	-72.1
47.00	1.42	0.64	0.10	2.16	.78	.46	1143	883.6	312.9	-73.2
47.50	1.55	0.64	0.10	2.29	.76	.43	1155	884.7	310.4	-74.3
48.00	0.99	0.64	0.10	1.73	.88	.56	1100	885.7	307.7	-75.3
48.50	0.81	0.64	0.10	1.55	.93	.62	1078	886.8	304.8	-76.4
49.00	0.73	0.64	0.10	1.47	.96	.65	1067	887.8	301.8	-77.4
49.50	0.68	0.64	0.10	1.42	.97	.66	1060	888.8	298.6	-78.4
50.00	0.64	0.64	0.10	1.38	.99	.68	1055	889.8	295.2	-79.3
50.50	0.63	0.63	0.09	1.36	.99	.69	1053	890.7	291.6	-80.2
51.00	0.65	0.63	0.09	1.37	.99	.70	1055	891.7	287.7	-81.1
39951.20	0.66	0.63	0.09	1.38	-16.99	-17.01	1057	892.1	286.0	-81.5
51.40	0.65	0.62	0.09	1.36	.99	.01	1054	892.4	284.4	-81.8
51.60	0.64	0.62	0.09	1.35	.99	.01	1054	892.8	282.6	-82.1
51.80	0.72	0.62	0.09	1.43	.97	-16.99	1064	893.2	280.9	-82.5
52.00	1.45	0.62	0.09	2.16	.80	.82	1145	893.5	279.0	-82.8
52.20	1.60	0.61	0.09	2.30	.77	.79	1157	893.9	277.2	-83.1
52.40	1.17	0.61	0.09	1.87	.86	.88	1116	894.2	275.2	-83.4
52.60	1.04	0.61	0.09	1.74	.89	.91	1101	894.6	273.3	-83.7
52.80	0.45	0.61	0.09	1.14	-17.07	-17.09	1009	894.9	271.2	-84.0
53.00	0.22	0.60	0.09	.92	.17	.18	958	895.3	269.1	-84.2
53.20	0.17	0.60	0.09	.86	.20	.21	943	895.6	267.0	-84.5
39953.50	0.19	0.60	0.09	.87	-17.19	-17.20	946	896.1	263.7	-84.8
54.00	0.22	0.59	0.09	.89	.18	.18	955	896.9	258.0	-85.4
54.50	0.24	0.58	0.08	.90	.17	.17	961	897.7	252.0	-85.8
55.00	0.20	0.57	0.08	.86	.19	.19	951	898.5	245.8	-86.2
55.50	0.18	0.57	0.08	.83	.20	.20	942	899.2	239.5	-86.5
56.00	0.16	0.56	0.08	.80	.22	.22	929	899.9	233.1	-86.7
56.50	0.17	0.55	0.08	.80	.22	.22	926	900.5	226.8	-86.7
57.00	0.22	0.54	0.08	.84	.20	.20	937	901.2	220.6	-86.7
57.50	0.30	0.53	0.07	.91	.17	.17	955	901.8	214.7	-86.6
58.00	0.33	0.52	0.07	.92	.17	.16	958	902.3	209.0	-86.4
58.50	0.39	0.51	0.07	.97	.14	.13	972	902.9	203.6	-86.2
59.00	0.44	0.49	0.07	1.00	.13	.12	977	903.3	198.5	-85.8
59.50	0.45	0.48	0.07	1.00	.13	.12	975	903.8	193.8	-85.4
60.00	0.40	0.46	0.06	.93	.16	.15	957	904.2	189.3	-85.0
60.50	0.44	0.45	0.06	.95	.16	.14	961	904.6	185.2	-84.5
61.00	0.42	0.44	0.06	.92	.17	.15	954	904.9	181.3	-83.9
61.50	0.40	0.42	0.06	.88	.18	.17	944	905.2	177.7	-83.3
62.00	0.45	0.41	0.05	.91	.17	.16	952	905.4	174.3	-82.7
62.50	0.45	0.39	0.05	.89	.18	.16	947	905.7	171.1	-82.1
63.00	0.45	0.38	0.05	.87	.19	.17	942	905.8	168.1	-81.4
63.50	0.44	0.37	0.05	.86	.19	.18	938	906.0	165.3	-80.7
64.00	0.43	0.35	0.04	.82	.21	.20	926	906.1	162.6	-80.0
64.50	0.42	0.34	0.04	.80	.22	.21	921	906.1	160.1	-79.3
65.00	0.41	0.32	0.04	.77	.24	.22	913	906.1	157.7	-78.6
65.50	0.40	0.30	0.04	.74	.25	.24	905	906.1	155.3	-77.8
66.00	0.38	0.28	0.03	.70	.27	.26	893	906.0	153.1	-77.0
66.50	0.40	0.26	0.03	.69	.28	.27	889	905.9	151.0	-76.3
67.00	0.42	0.25	0.03	.69	.28	.27	889	905.7	148.9	-75.5
67.50	0.45	0.23	0.03	.70	.27	.26	892	905.6	147.0	-74.7
68.00	0.51	0.21	0.02	.75	.25	.23	908	905.3	145.1	-73.9
68.50	0.58	0.19	0.02	.79	.23	.21	920	905.1	143.2	-73.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39969.00	0.62	0.17	0.02	.80	-17.22	-17.21	921	904.8	141.4	-72.3
69.50	0.65	0.16	0.02	.82	.21	.20	928	904.4	139.6	-71.5
70.00	0.58	0.14	0.01	.73	.26	.25	897	904.0	137.9	-70.6
70.50	0.56	0.12	0.01	.69	.29	.28	884	903.6	136.2	-69.8
71.00	0.56	0.10	0.01	.66	.30	.29	876	903.2	134.6	-69.0
71.50	0.62	0.08	0.01	.71	.27	.26	897	902.7	133.0	-68.1
72.00	0.72	0.06	0.00	.78	.23	.23	918	902.2	131.4	-67.3
72.50	0.78	0.05	0.00	.83	.21	.21	931	901.7	129.9	-66.4
73.00	0.85	0.03	0.00	.88	.19	.19	943	901.1	128.3	-65.6
73.50	0.81	0.01	0.00	.82	.22	.22	926	900.5	126.8	-64.7
74.00	0.77	0.00	-0.01	.76	.25	.25	908	899.8	125.4	-63.9
74.50	0.78	-0.02	-0.01	.75	.25	.26	906	899.2	123.9	-63.0
75.00	0.80	-0.03	-0.01	.75	.25	.26	907	898.5	122.5	-62.1
75.50	0.84	-0.04	-0.01	.78	.24	.24	917	897.8	121.1	-61.3
76.00	0.84	-0.05	-0.02	.77	.24	.25	915	897.0	119.7	-60.4
76.50	0.82	-0.06	-0.02	.74	.26	.27	907	896.3	118.3	-59.5
77.00	0.79	-0.07	-0.02	.70	.28	.29	895	895.5	116.9	-58.7
39977.20	0.82	-0.07	-0.02	.72	-17.27	-17.28	902	895.2	116.3	-58.3
77.40	0.84	-0.07	-0.02	.74	.26	.27	910	894.8	115.8	-58.0
77.60	0.91	-0.07	-0.02	.81	.22	.23	935	894.5	115.3	-57.6
77.80	0.93	-0.08	-0.03	.83	.21	.22	939	894.2	114.7	-57.3
78.00	1.06	-0.08	-0.03	.96	.15	.17	973	893.8	114.2	-56.9
78.20	1.16	-0.08	-0.03	1.06	.11	.13	996	893.5	113.6	-56.6
78.40	1.12	-0.08	-0.03	1.01	.13	.15	984	893.2	113.1	-56.2
78.60	1.07	-0.08	-0.03	.96	.15	.17	974	892.8	112.6	-55.9
78.80	0.97	-0.08	-0.03	.86	.20	.22	948	892.5	112.1	-55.5
79.00	0.98	-0.08	-0.03	.87	.19	.21	953	892.1	111.5	-55.2
79.20	0.99	-0.08	-0.03	.87	.19	.21	952	891.8	111.0	-54.8
79.40	1.04	-0.08	-0.03	.93	.17	.19	967	891.4	110.5	-54.5
79.60	1.01	-0.07	-0.03	.90	.18	.20	960	891.1	109.9	-54.1
79.80	0.97	-0.07	-0.03	.86	.20	.22	951	890.7	109.4	-53.8
80.00	0.98	-0.07	-0.04	.87	.19	.21	956	890.3	108.9	-53.4
80.20	0.99	-0.06	-0.04	.89	.18	.21	962	890.0	108.4	-53.0
80.40	1.00	-0.06	-0.04	.91	.17	.20	967	889.6	107.9	-52.7
80.60	0.98	-0.05	-0.04	.89	.18	.21	963	889.2	107.3	-52.3
80.80	0.98	-0.03	-0.04	.91	.17	.20	969	888.9	106.8	-52.0
81.00	0.98	-0.03	-0.04	.91	.17	.20	970	888.5	106.3	-51.6
81.20	1.01	-0.01	-0.04	.96	.15	.18	983	888.1	105.8	-51.3
81.40	1.02	0.00	-0.04	.98	.14	.17	969	887.7	105.3	-50.9
81.60	1.02	0.00	-0.04	.97	.14	.17	987	887.4	104.8	-50.6
81.80	1.01	0.00	-0.04	.96	.14	.18	985	887.0	104.3	-50.2
82.00	0.97	0.00	-0.04	.92	.16	.20	976	886.6	103.7	-49.8
82.20	0.96	0.00	-0.04	.91	.17	.20	974	886.2	103.2	-49.5
82.40	0.93	0.00	-0.05	.88	.18	.22	967	885.8	102.7	-49.1
82.60	0.99	0.00	-0.05	.94	.15	.19	984	885.4	102.2	-48.8
82.80	1.06	0.00	-0.05	1.02	.11	.15	1004	885.1	101.7	-48.4
83.00	1.12	0.00	-0.05	1.07	.09	.14	1014	884.7	101.2	-48.1
83.20	1.44	0.00	-0.05	1.39	-16.98	.03	1071	884.3	100.7	-47.7
83.40	1.91	0.00	-0.05	1.86	.85	-16.90	1131	883.9	100.2	-47.4
83.60	2.42	0.00	-0.05	2.37	.74	.80	1181	883.5	99.7	-47.0
83.80	1.90	0.00	-0.05	1.85	.85	.91	1132	883.1	99.2	-46.7
84.00	1.38	0.00	-0.05	1.33	-17.00	-17.05	1064	882.7	98.7	-46.3
84.20	1.31	0.00	-0.05	1.25	.02	.08	1051	882.3	98.2	-45.9
84.40	1.29	0.00	-0.05	1.24	.03	.08	1050	881.9	97.7	-45.6
84.60	1.30	0.00	-0.05	1.24	.03	.08	1051	881.5	97.2	-45.2
84.80	1.31	0.00	-0.05	1.26	.02	.07	1055	881.1	96.7	-44.9
85.00	1.31	0.00	-0.05	1.26	.02	.07	1056	880.7	96.2	-44.5
85.20	1.30	0.00	-0.06	1.24	.03	.08	1052	880.3	95.7	-44.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39985.50	1.31	0.00	-0.06	1.25	-17.02	-17.08	1055	879.7	95.0	-43.6
86.00	1.36	0.00	-0.06	1.30	.00	.07	1064	878.7	93.8	-42.7
86.50	1.37	0.00	-0.06	1.31	.00	.06	1068	877.7	92.5	-41.8
87.00	1.40	0.00	-0.06	1.34	-16.98	.06	1074	876.7	91.3	-40.9
87.50	1.39	0.00	-0.06	1.32	.99	.07	1073	875.7	90.1	-40.1
88.00	1.36	0.00	-0.06	1.29	-17.00	.08	1070	874.7	88.9	-39.2
88.50	1.34	0.00	-0.06	1.27	.00	.09	1069	873.7	87.6	-38.3
89.00	1.26	0.00	-0.07	1.20	.02	.11	1058	872.7	86.4	-37.4
89.50	1.25	0.00	-0.07	1.18	.03	.12	1056	871.7	85.2	-36.5
90.00	1.26	0.00	-0.07	1.19	.02	.12	1060	870.7	84.0	-35.6
90.50	1.28	0.00	-0.07	1.21	.02	.11	1064	869.7	82.8	-34.7
91.00	1.30	0.00	-0.07	1.23	.01	.11	1069	868.8	81.6	-33.8
91.50	1.36	0.00	-0.07	1.29	-16.98	.09	1081	867.8	80.4	-32.9
92.00	1.43	0.00	-0.07	1.36	.96	.07	1093	866.9	79.2	-32.0
92.50	1.50	0.00	-0.07	1.43	.93	.05	1105	865.9	78.0	-31.1
39993.00	1.54	0.00	-0.07	1.47	-16.91	-17.04	1112	865.0	76.8	-30.2
93.25	1.58	0.00	-0.07	1.50	.91	.03	1116	864.5	76.2	-29.7
93.50	1.61	0.00	-0.07	1.54	.89	.02	1122	864.1	75.6	-29.3
93.75	1.66	0.00	-0.08	1.59	.87	.00	1131	863.7	75.0	-28.8
94.00	1.72	0.00	-0.08	1.64	.85	-16.99	1140	863.2	74.4	-28.4
94.25	1.77	0.00	-0.08	1.69	.83	.97	1146	862.8	73.8	-27.9
94.50	1.80	0.00	-0.08	1.73	.82	.97	1150	862.3	73.2	-27.5
94.75	1.82	0.00	-0.08	1.75	.81	.96	1156	861.9	72.6	-27.0
95.00	1.88	-0.03	-0.08	1.77	.80	.95	1161	861.5	72.0	-26.6
95.25	1.94	-0.06	-0.08	1.81	.79	.94	1164	861.1	71.4	-26.1
95.50	2.01	-0.08	-0.08	1.85	.79	.94	1167	860.7	70.8	-25.7
95.75	2.06	-0.09	-0.08	1.89	.77	.92	1174	860.2	70.2	-25.2
96.00	2.20	-0.11	-0.08	2.00	.74	.90	1187	859.8	69.6	-24.8
96.25	2.36	-0.13	-0.08	2.16	.70	.86	1203	859.4	69.0	-24.3
96.50	2.41	-0.15	-0.08	2.19	.69	.85	1207	859.1	68.4	-23.9
96.75	2.48	-0.16	-0.08	2.24	.68	.85	1210	858.7	67.8	-23.4
97.00	2.54	-0.19	-0.08	2.28	.67	.84	1214	858.3	67.2	-23.0
97.25	2.61	-0.19	-0.08	2.34	.66	.82	1221	857.9	66.6	-22.5
97.50	2.64	-0.20	-0.08	2.36	.65	.82	1224	857.5	66.0	-22.1
97.75	2.68	-0.21	-0.08	2.39	.64	.81	1228	857.2	65.4	-21.6
98.00	2.90	-0.22	-0.08	2.61	.60	.77	1246	856.8	64.8	-21.2
98.25	2.92	-0.22	-0.08	2.62	.59	.77	1248	856.5	64.2	-20.7
98.50	2.54	-0.23	-0.08	2.23	.66	.84	1219	856.1	63.6	-20.3
98.75	2.41	-0.24	-0.08	2.10	.69	.87	1206	855.8	63.0	-19.8
99.00	2.40	-0.24	-0.08	2.08	.70	.88	1204	855.5	62.4	-19.3
99.25	2.47	-0.24	-0.08	2.15	.68	.86	1211	855.1	61.8	-18.9
99.50	2.53	-0.25	-0.08	2.20	.68	.86	1214	854.8	61.2	-18.4
99.75	2.57	-0.25	-0.08	2.24	.67	.85	1218	854.5	60.6	-18.0
40000.00	2.74	-0.25	-0.08	2.41	.63	.81	1235	854.2	60.0	-17.5
00.25	2.93	-0.26	-0.08	2.60	.59	.77	1251	853.9	59.4	-17.1
00.50	2.87	-0.26	-0.07	2.53	.60	.79	1246	853.6	58.8	-16.6
00.75	2.72	-0.26	-0.07	2.38	.63	.82	1233	853.4	58.2	-16.2
01.00	2.70	-0.26	-0.07	2.36	.64	.83	1232	853.1	57.6	-15.7
01.25	2.68	-0.26	-0.07	2.35	.64	.83	1230	852.8	57.0	-15.3
01.50	2.67	-0.26	-0.07	2.33	.65	.84	1227	852.6	56.4	-14.8
01.75	2.65	-0.26	-0.07	2.32	.65	.84	1228	852.3	55.8	-14.4
02.00	2.63	-0.26	-0.07	2.30	.65	.84	1227	852.1	55.2	-13.9
02.25	2.64	-0.26	-0.07	2.31	.65	.84	1228	851.9	54.6	-13.5
02.50	2.63	-0.25	-0.07	2.30	.65	.85	1227	851.7	54.0	-13.0
02.75	2.62	-0.25	-0.07	2.29	.65	.85	1226	851.5	53.4	-12.5
03.00	2.59	-0.25	-0.07	2.27	.66	.86	1224	851.3	52.8	-12.1
03.25	2.56	-0.25	-0.07	2.24	.67	.86	1222	851.1	52.2	-11.6
03.50	2.60	-0.24	-0.07	2.28	.66	.86	1226	850.9	51.6	-11.2
03.75	2.61	-0.24	-0.07	2.29	.65	.85	1228	850.7	51.0	-10.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40004.00	2.63	-0.24	-0.07	2.32	-16.64	-16.85	1232	850.5	50.4	-10.3
04.25	2.65	-0.23	-0.07	2.34	.64	.84	1235	850.4	49.8	-9.8
04.50	2.64	-0.23	-0.07	2.34	.64	.84	1234	850.2	49.2	-9.4
04.75	2.70	-0.23	-0.07	2.40	.63	.84	1238	850.1	48.6	-8.9
05.00	2.78	-0.22	-0.07	2.49	.61	.82	1247	850.0	48.0	-8.4
05.25	2.84	-0.22	-0.07	2.55	.60	.81	1251	849.9	47.4	-8.0
05.50	2.85	-0.21	-0.07	2.56	.60	.81	1252	849.8	46.8	-7.5
05.75	2.84	-0.21	-0.07	2.56	.60	.81	1252	849.7	46.2	-7.1
06.00	2.77	-0.21	-0.07	2.50	.61	.82	1249	849.6	45.6	-6.6
06.25	2.68	-0.20	-0.07	2.41	.62	.83	1243	849.5	45.0	-6.2
06.50	2.64	-0.19	-0.07	2.38	.63	.84	1240	849.5	44.4	-5.7
06.75	2.57	-0.19	-0.06	2.32	.65	.86	1235	849.4	43.8	-5.2
07.00	2.53	-0.18	-0.06	2.28	.65	.86	1233	849.4	43.1	-4.8
07.25	2.42	-0.18	-0.06	2.18	.67	.88	1227	849.3	42.5	-4.3
07.50	2.34	-0.17	-0.06	2.11	.69	.90	1221	849.3	41.9	-3.9
07.75	2.24	-0.17	-0.06	2.01	.71	.92	1213	849.3	41.3	-3.4
08.00	2.23	-0.16	-0.06	2.01	.71	.92	1214	849.3	40.7	-2.9
08.25	2.12	-0.16	-0.06	1.90	.73	.95	1204	849.3	40.1	-2.5
08.50	2.11	-0.15	-0.06	1.90	.73	.95	1205	849.3	39.5	-2.0
40008.80	2.30	-0.15	-0.06	2.10	-16.68	-16.89	1226	849.4	38.7	-1.5
09.00	2.42	-0.14	-0.06	2.23	.66	.87	1237	849.4	38.2	-1.1
09.20	2.57	-0.13	-0.06	2.38	.63	.84	1249	849.4	37.7	-0.7
09.40	2.47	-0.13	-0.06	2.29	.64	.86	1243	849.5	37.3	-0.4
09.60	2.40	-0.12	-0.06	2.22	.66	.87	1237	849.5	36.8	0.0
09.80	2.27	-0.11	-0.06	2.10	.69	.90	1227	849.6	36.3	0.4
10.00	2.31	-0.11	-0.05	2.15	.68	.89	1232	849.7	35.8	0.7
10.20	2.54	-0.10	-0.05	2.38	.63	.84	1251	849.7	35.3	1.1
10.40	2.30	-0.10	-0.05	2.16	.68	.89	1232	849.8	34.8	1.5
10.60	2.11	-0.09	-0.05	1.97	.72	.93	1215	849.9	34.3	1.8
10.80	2.03	-0.09	-0.05	1.90	.74	.95	1211	850.0	33.8	2.2
11.00	2.01	-0.08	-0.05	1.88	.74	.95	1210	850.1	33.3	2.6
11.20	2.00	-0.07	-0.05	1.87	.74	.95	1209	850.2	32.8	2.9
11.40	1.95	-0.07	-0.05	1.83	.76	.97	1204	850.4	32.3	3.3
11.60	1.91	-0.06	-0.05	1.80	.77	.98	1200	850.5	31.8	3.7
11.80	1.86	-0.06	-0.05	1.76	.78	.99	1197	850.6	31.3	4.1
12.00	1.86	-0.05	-0.05	1.76	.78	.98	1198	850.8	30.8	4.4
12.20	1.83	-0.05	-0.05	1.74	.78	.99	1197	850.9	30.3	4.8
12.40	1.82	-0.04	-0.04	1.73	.79	-17.00	1195	851.0	29.8	5.2
12.60	1.79	-0.03	-0.04	1.71	.80	.00	1192	851.2	29.3	5.5
12.80	1.77	-0.03	-0.04	1.70	.81	.01	1191	851.4	28.8	5.9
13.00	1.76	-0.02	-0.04	1.69	.81	.01	1191	851.5	28.3	6.3
13.20	1.68	-0.02	-0.04	1.62	.83	.03	1183	851.7	27.8	6.6
13.40	1.62	-0.01	-0.04	1.57	.85	.05	1177	851.9	27.2	7.0
13.60	1.61	-0.01	-0.04	1.56	.85	.05	1176	852.1	26.7	7.4
13.80	1.60	0.00	-0.04	1.56	.85	.05	1177	852.3	26.2	7.8
14.00	1.64	0.00	-0.04	1.60	.84	.04	1183	852.5	25.7	8.1
14.20	1.69	0.01	-0.04	1.66	.82	.02	1190	852.7	25.2	8.5
14.40	1.71	0.02	-0.04	1.69	.81	.01	1194	852.9	24.7	8.9
14.60	1.73	0.02	-0.03	1.72	.80	.00	1200	853.1	24.2	9.2
14.80	1.74	0.03	-0.03	1.73	.79	-16.99	1203	853.4	23.7	9.6
15.00	1.75	0.03	-0.03	1.75	.79	.99	1205	853.6	23.2	10.0
15.20	1.78	0.04	-0.03	1.78	.79	.98	1206	853.8	22.6	10.4
15.40	1.82	0.04	-0.03	1.83	.78	.97	1211	854.1	22.1	10.7
15.60	1.86	0.05	-0.03	1.88	.77	.96	1216	854.4	21.6	11.1
15.80	1.92	0.06	-0.03	1.95	.75	.94	1225	854.6	21.1	11.5
16.00	1.98	0.06	-0.03	2.02	.72	.92	1235	854.9	20.6	11.8
16.20	1.97	0.07	-0.03	2.01	.73	.92	1233	855.2	20.0	12.2
16.40	1.91	0.07	-0.03	1.95	.75	.94	1226	855.4	19.5	12.6
16.60	1.77	0.08	-0.03	1.83	.78	.97	1214	855.7	19.0	13.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40016.80	1.74	0.09	-0.03	1.80	-16.80	-16.98	1210	856.0	18.5	13.3
17.00	1.78	0.09	-0.02	1.85	.78	.97	1217	856.3	18.0	13.7
17.20	1.78	0.10	-0.02	1.86	.77	.96	1221	856.6	17.4	14.1
17.40	1.80	0.11	-0.02	1.88	.76	.95	1226	856.9	16.9	14.5
17.60	1.92	0.11	-0.02	2.01	.73	.91	1239	857.3	16.4	14.8
17.80	1.96	0.12	-0.02	2.05	.73	.91	1241	857.6	15.8	15.2
18.00	2.29	0.13	-0.02	2.40	.67	.85	1266	857.9	15.3	15.6
18.20	2.75	0.13	-0.02	2.86	.58	.76	1302	858.2	14.8	16.0
18.40	3.20	0.14	-0.02	3.31	.50	.67	1338	858.6	14.2	16.3
18.60	2.36	0.14	-0.02	2.48	.63	.80	1285	858.9	13.7	16.7
18.80	2.10	0.15	-0.02	2.23	.68	.86	1263	859.3	13.1	17.1
40019.00	1.96	0.15	-0.02	2.10	-16.72	-16.89	1251	859.6	12.6	17.5
19.25	1.73	0.16	-0.02	1.87	.78	.95	1229	860.1	11.9	18.0
19.50	1.63	0.17	-0.01	1.79	.80	.97	1221	860.5	11.3	18.4
19.75	1.58	0.17	-0.01	1.75	.81	.98	1217	861.0	10.6	18.9
20.00	1.52	0.18	-0.01	1.68	.83	-17.00	1211	861.4	9.9	19.4
20.25	1.51	0.19	-0.01	1.68	.84	.00	1210	861.9	9.2	19.8
20.50	1.70	0.20	-0.01	1.89	.78	-16.94	1232	862.4	8.5	20.3
20.75	1.56	0.20	-0.01	1.75	.82	.98	1221	862.9	7.8	20.8
21.00	1.31	0.21	-0.01	1.51	.89	-17.05	1194	863.4	7.1	21.2
21.25	1.24	0.21	-0.01	1.45	.92	.08	1184	863.9	6.4	21.7
21.50	1.47	0.22	-0.01	1.69	.86	.01	1210	864.4	5.7	22.2
21.75	1.32	0.23	0.00	1.54	.89	.04	1197	865.0	5.0	22.6
22.00	1.02	0.23	0.00	1.25	.99	.14	1162	865.5	4.3	23.1
22.25	0.86	0.24	0.00	1.09	-17.07	.21	1136	866.0	3.6	23.6
22.50	0.90	0.24	0.00	1.14	.06	.19	1141	866.6	2.9	24.0
22.75	0.93	0.25	0.00	1.18	.05	.18	1146	867.1	2.1	24.5
23.00	0.91	0.26	0.00	1.17	.05	.18	1145	867.7	1.4	25.0
23.25	0.90	0.26	0.00	1.17	.06	.19	1145	868.2	0.7	25.4
23.50	0.93	0.27	0.00	1.21	.05	.17	1149	868.8	360.0	25.9
23.75	1.07	0.28	0.00	1.35	.00	.12	1168	869.4	359.2	26.4
24.00	1.20	0.28	0.00	1.49	-16.95	.07	1188	869.9	358.5	26.9
24.25	1.40	0.29	0.01	1.70	.89	.01	1211	870.5	357.7	27.3
24.50	1.29	0.30	0.01	1.59	.92	.04	1202	871.1	357.0	27.8
24.75	1.09	0.31	0.01	1.40	.98	.10	1179	871.7	356.2	28.3
25.00	0.94	0.31	0.01	1.26	-17.04	.16	1158	872.3	355.4	28.7
25.25	0.84	0.32	0.01	1.17	.08	.19	1146	872.9	354.7	29.2
25.50	0.80	0.33	0.01	1.14	.09	.20	1143	873.5	353.9	29.7
25.75	0.75	0.33	0.01	1.10	.11	.21	1140	874.1	353.1	30.1
26.00	0.88	0.34	0.01	1.23	.06	.16	1160	874.7	352.3	30.6
26.25	0.86	0.34	0.01	1.22	.06	.16	1159	875.3	351.5	31.1
26.50	0.86	0.35	0.01	1.23	.06	.16	1160	876.0	350.7	31.5
26.75	0.84	0.36	0.01	1.21	.07	.17	1157	876.6	349.9	32.0
27.00	0.72	0.36	0.02	1.10	.12	.21	1143	877.2	349.1	32.5
27.25	0.69	0.37	0.02	1.07	.13	.22	1139	877.8	348.3	33.0
27.50	0.65	0.38	0.02	1.04	.15	.24	1132	878.5	347.5	33.4
27.75	0.61	0.38	0.02	1.00	.18	.26	1125	879.1	346.6	33.9
28.00	0.58	0.39	0.02	.98	.18	.27	1123	879.8	345.8	34.3
28.25	0.56	0.39	0.02	.97	.19	.27	1122	880.4	344.9	34.8
28.50	0.54	0.40	0.02	.96	.21	.28	1119	881.0	344.1	35.3
28.75	0.55	0.40	0.02	.98	.20	.27	1122	881.7	343.2	35.7
29.00	0.56	0.41	0.02	.99	.20	.26	1125	882.3	342.3	36.2
29.25	0.63	0.42	0.02	1.07	.16	.23	1138	883.0	341.4	36.7
29.50	0.70	0.42	0.02	1.14	.13	.20	1151	883.6	340.5	37.1
29.75	0.57	0.43	0.02	1.02	.17	.24	1137	884.3	339.6	37.6
30.00	0.63	0.43	0.03	1.09	.15	.21	1147	885.0	338.7	38.0
30.25	0.65	0.44	0.03	1.12	.14	.20	1150	885.6	337.7	38.5
30.50	0.59	0.44	0.03	1.06	.17	.23	1141	886.3	336.8	38.9
30.75	0.57	0.44	0.03	1.04	.19	.24	1137	886.9	335.8	39.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40031.00	0.55	0.45	0.03	1.03	-17.19	-17.24	1135	887.6	334.9	39.9
31.25	0.47	0.45	0.03	.95	.23	.28	1122	888.2	333.9	40.3
31.50	0.38	0.46	0.03	.87	.28	.32	1108	888.9	332.9	40.8
31.75	0.40	0.46	0.03	.89	.27	.31	1112	889.6	331.8	41.2
32.00	0.40	0.47	0.03	.90	.27	.30	1114	890.2	330.8	41.6
32.25	0.37	0.47	0.03	.87	.28	.32	1109	890.9	329.7	42.1
32.50	0.33	0.47	0.03	.84	.30	.34	1103	891.5	328.7	42.5
32.75	0.30	0.47	0.03	.81	.32	.35	1098	892.2	327.6	43.0
33.00	0.37	0.48	0.03	.88	.28	.31	1112	892.9	326.5	43.4
33.25	0.50	0.48	0.04	1.02	.22	.24	1139	893.5	325.3	43.8
33.50	0.49	0.48	0.04	1.01	.22	.25	1137	894.2	324.2	44.3
33.75	0.49	0.49	0.04	1.02	.22	.24	1139	894.8	323.0	44.7
34.00	0.45	0.49	0.04	.98	.24	.26	1133	895.5	321.8	45.1
34.25	0.39	0.50	0.04	.93	.27	.28	1124	896.1	320.5	45.6
34.50	0.35	0.50	0.04	.89	.29	.31	1116	896.8	319.2	46.0
34.75	0.31	0.50	0.04	.85	.31	.32	1110	897.5	317.9	46.4
35.00	0.23	0.51	0.04	.77	.36	.37	1095	898.1	316.6	46.9
35.25	0.19	0.51	0.04	.75	.37	.38	1090	898.7	315.2	47.3
35.50	0.18	0.51	0.04	.74	.39	.39	1086	899.4	313.8	47.7
35.75	0.16	0.52	0.04	.72	.40	.40	1082	900.0	312.4	48.1
36.00	0.16	0.52	0.04	.73	.40	.39	1085	900.7	310.9	48.5
36.25	0.15	0.53	0.04	.72	.40	.40	1083	901.3	309.4	48.9
36.50	0.23	0.53	0.04	.80	.36	.35	1101	901.9	307.8	49.3
36.75	0.29	0.53	0.04	.87	.33	.32	1115	902.6	306.2	49.7
37.00	0.31	0.53	0.05	.89	.31	.30	1121	903.2	304.5	50.1
37.25	0.31	0.54	0.05	.89	.31	.30	1123	903.8	302.8	50.5
37.50	0.23	0.54	0.05	.82	.35	.34	1108	904.4	301.0	50.9
37.75	0.20	0.54	0.05	.79	.37	.36	1102	905.1	299.2	51.3
38.00	0.21	0.55	0.05	.80	.37	.35	1104	905.7	297.3	51.6
38.25	0.26	0.55	0.05	.86	.34	.31	1117	906.3	295.3	52.0
38.50	0.21	0.55	0.05	.81	.36	.34	1108	906.9	293.3	52.3
38.75	0.02	0.55	0.05	.62	.46	.46	1064	907.5	291.2	52.7
39.00	-0.07	0.55	0.05	.54	.55	.52	1041	908.1	289.0	53.0
39.25	-0.01	0.56	0.05	.60	.50	.47	1059	908.7	286.7	53.3
39.50	-0.02	0.56	0.05	.59	.51	.48	1057	909.3	284.4	53.6
39.75	0.00	0.56	0.05	.60	.50	.47	1061	909.9	282.0	53.9
40.00	0.10	0.56	0.05	.70	.44	.40	1088	910.4	279.5	54.2
40.25	0.12	0.56	0.05	.73	.42	.38	1095	911.0	277.0	54.4
40.50	0.24	0.56	0.05	.85	.35	.31	1121	911.6	274.3	54.7
40.75	0.17	0.56	0.05	.78	.39	.35	1107	912.1	271.6	54.9
41.00	-0.05	0.56	0.05	.56	.54	.50	1053	912.7	268.8	55.1
41.25	-0.11	0.56	0.05	.50	.59	.54	1034	913.2	266.0	55.3
41.50	-0.11	0.56	0.05	.50	.59	.54	1034	913.8	263.1	55.5
41.75	-0.06	0.56	0.05	.55	.55	.50	1052	914.3	260.1	55.7
42.00	-0.06	0.56	0.05	.55	.55	.50	1053	914.8	257.1	55.8
42.25	-0.05	0.56	0.05	.56	.54	.49	1058	915.4	254.0	55.9
42.50	-0.03	0.56	0.05	.58	.52	.47	1066	915.9	250.9	56.0
42.75	-0.03	0.56	0.06	.59	.52	.47	1070	916.4	247.7	56.1
43.00	-0.03	0.56	0.06	.58	.52	.47	1068	916.9	244.6	56.1
43.25	-0.06	0.56	0.06	.56	.54	.49	1063	917.4	241.5	56.1
43.50	-0.05	0.56	0.06	.56	.54	.48	1063	917.9	238.3	56.1
43.75	-0.06	0.56	0.06	.55	.55	.49	1060	918.4	235.2	56.1
44.00	-0.08	0.56	0.06	.54	.55	.50	1060	918.8	232.1	56.0
44.25	-0.08	0.56	0.06	.53	.56	.51	1059	919.3	229.1	56.0
44.50	-0.07	0.56	0.06	.54	.56	.50	1060	919.8	226.1	55.9
44.75	-0.06	0.55	0.06	.55	.55	.49	1063	920.2	223.1	55.8
45.00	-0.06	0.55	0.06	.55	.55	.49	1065	920.7	220.2	55.7
45.25	-0.05	0.55	0.06	.56	.54	.48	1068	921.1	217.4	55.5
45.50	-0.06	0.55	0.06	.55	.55	.48	1064	921.5	214.7	55.3
45.75	-0.06	0.55	0.06	.55	.55	.48	1064	921.9	212.0	55.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40046.00	-0.04	0.55	0.06	.57	-17.54	-17.47	1071	922.4	209.4	55.0
46.25	-0.03	0.55	0.06	.58	.53	.46	1075	922.8	206.9	54.8
46.50	-0.03	0.55	0.06	.58	.53	.46	1073	923.1	204.6	54.5
46.75	-0.03	0.55	0.06	.58	.53	.46	1073	923.5	202.2	54.3
47.00	-0.03	0.55	0.06	.57	.54	.47	1069	923.9	199.9	54.0
47.25	-0.02	0.55	0.06	.58	.54	.45	1071	924.3	197.7	53.8
47.50	0.00	0.54	0.06	.60	.52	.43	1079	924.6	195.5	53.5
47.75	0.04	0.54	0.06	.64	.49	.40	1090	925.0	193.4	53.2
48.00	0.02	0.54	0.06	.62	.50	.41	1086	925.3	191.4	52.9
48.25	0.04	0.53	0.06	.63	.50	.40	1088	925.6	189.4	52.6
48.50	0.03	0.53	0.06	.62	.51	.42	1084	925.9	187.5	52.3
48.75	0.02	0.53	0.06	.61	.52	.43	1082	926.3	185.7	51.9
49.00	0.01	0.53	0.06	.59	.53	.44	1075	926.6	183.9	51.6
49.25	-0.01	0.52	0.06	.57	.55	.45	1070	926.8	182.2	51.3
49.50	-0.07	0.52	0.06	.51	.60	.51	1050	927.1	180.5	50.9
49.75	-0.07	0.51	0.06	.50	.61	.52	1046	927.4	178.9	50.6
50.00	-0.08	0.51	0.06	.49	.62	.52	1042	927.6	177.3	50.2
50.25	-0.09	0.50	0.06	.47	.64	.54	1035	927.9	175.7	49.8
50.50	-0.10	0.50	0.06	.45	.66	.56	1027	928.1	174.3	49.5
50.75	0.03	0.49	0.06	.58	.55	.45	1073	928.3	172.8	49.1
51.00	0.15	0.49	0.06	.69	.47	.36	1105	928.6	171.4	48.7
51.25	0.27	0.48	0.06	.81	.39	.28	1134	928.8	170.0	48.3
51.50	0.24	0.47	0.06	.77	.42	.32	1123	928.9	168.7	47.9
51.75	0.21	0.47	0.05	.74	.44	.34	1115	929.1	167.4	47.6
52.00	0.11	0.46	0.05	.63	.51	.41	1087	929.3	166.1	47.2
52.25	0.01	0.46	0.05	.53	.59	.49	1056	929.5	164.9	46.8
52.50	0.00	0.45	0.05	.50	.62	.52	1045	929.6	163.6	46.4
52.75	-0.01	0.45	0.05	.50	.62	.52	1046	929.7	162.5	46.0
53.00	0.00	0.44	0.05	.50	.62	.52	1046	929.9	161.3	45.6
53.25	0.00	0.43	0.05	.49	.63	.53	1041	930.0	160.2	45.1
53.50	0.02	0.42	0.05	.49	.63	.53	1042	930.1	159.0	44.7
53.75	0.01	0.42	0.05	.48	.64	.54	1037	930.2	157.9	44.3
54.00	0.02	0.41	0.05	.49	.63	.53	1040	930.3	156.9	43.9
54.25	0.09	0.40	0.05	.54	.59	.49	1060	930.3	155.8	43.5
54.50	0.11	0.39	0.05	.55	.58	.48	1065	930.4	154.8	43.1
54.75	0.12	0.38	0.05	.55	.58	.48	1064	930.4	153.8	42.7
55.00	0.12	0.37	0.05	.54	.59	.49	1059	930.5	152.8	42.2
55.25	0.17	0.36	0.05	.58	.56	.46	1071	930.5	151.8	41.8
55.50	0.20	0.35	0.05	.60	.54	.45	1078	930.5	150.8	41.4
55.75	0.23	0.33	0.05	.62	.53	.43	1083	930.5	149.8	41.0
56.00	0.23	0.32	0.05	.60	.54	.45	1077	930.5	148.9	40.6
56.25	0.20	0.30	0.05	.56	.57	.48	1067	930.5	148.0	40.1
56.50	0.18	0.29	0.05	.52	.61	.51	1051	930.4	147.1	39.7
56.75	0.19	0.27	0.05	.51	.62	.52	1047	930.4	146.2	39.3
57.00	0.21	0.25	0.05	.51	.61	.52	1047	930.3	145.3	38.9
57.25	0.22	0.24	0.05	.51	.62	.52	1046	930.3	144.4	38.4
57.50	0.24	0.22	0.05	.51	.61	.52	1049	930.2	143.5	38.0
57.75	0.24	0.20	0.05	.49	.63	.54	1045	930.1	142.7	37.6
58.00	0.28	0.18	0.05	.51	.61	.53	1051	930.0	141.8	37.1
58.25	0.33	0.15	0.05	.53	.60	.51	1057	929.9	141.0	36.7
58.50	0.39	0.13	0.05	.56	.57	.49	1067	929.8	140.1	36.3
58.75	0.42	0.10	0.04	.57	.57	.48	1067	929.6	139.3	35.8
59.00	0.48	0.07	0.04	.59	.55	.46	1070	929.5	138.5	35.4
59.25	0.53	0.03	0.04	.61	.54	.45	1075	929.4	137.7	35.0
59.50	0.58	0.00	0.04	.62	.53	.44	1077	929.2	136.9	34.5
59.75	0.61	0.00	0.04	.65	.51	.42	1085	929.0	136.1	34.1
60.00	0.60	0.00	0.04	.64	.52	.43	1083	928.9	135.3	33.7
60.25	0.59	0.00	0.04	.63	.52	.43	1082	928.7	134.5	33.2
60.50	0.56	0.00	0.04	.60	.54	.45	1071	928.5	133.8	32.8
60.75	0.55	0.00	0.04	.59	.55	.46	1067	928.4	133.0	32.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40061.00	0.55	0.00	0.04	.59	-17.55	-17.46	1068	928.0	132.2	31.9
61.25	0.50	0.00	0.04	.54	.59	.50	1053	927.8	131.5	31.5
61.50	0.49	0.00	0.04	.53	.59	.51	1050	927.5	130.7	31.0
61.75	0.48	0.00	0.04	.52	.60	.52	1046	927.3	130.0	30.6
62.00	0.46	0.00	0.04	.50	.62	.54	1038	927.0	129.2	30.2
62.25	0.45	0.00	0.04	.48	.63	.55	1029	926.8	128.5	29.7
62.50	0.45	0.00	0.04	.48	.63	.55	1027	926.5	127.8	29.3
62.75	0.44	0.00	0.03	.48	.63	.55	1025	926.2	127.1	28.8
63.00	0.49	0.00	0.03	.52	.60	.51	1040	925.9	126.3	28.4
63.25	0.53	0.00	0.03	.56	.57	.48	1054	925.6	125.6	28.0
63.50	0.62	0.00	0.03	.65	.50	.42	1081	925.3	124.9	27.5
63.75	0.63	0.00	0.03	.66	.49	.40	1084	925.0	124.2	27.1
64.00	0.65	0.00	0.03	.68	.48	.39	1089	924.7	123.5	26.6
64.25	0.71	0.00	0.03	.74	.44	.35	1104	924.4	122.8	26.2
64.50	0.64	0.00	0.03	.67	.48	.40	1086	924.0	122.1	25.8
64.75	0.52	0.00	0.03	.55	.57	.49	1049	923.7	121.4	25.3
65.00	0.52	0.00	0.03	.55	.57	.49	1048	923.3	120.7	24.9
65.25	0.51	0.00	0.03	.54	.57	.50	1045	923.0	120.1	24.4
65.50	0.50	0.00	0.03	.52	.59	.52	1037	922.6	119.4	24.0
65.75	0.48	0.00	0.03	.51	.59	.53	1033	922.2	118.7	23.6
66.00	0.49	0.00	0.03	.52	.59	.51	1036	921.9	118.0	23.1
66.25	0.51	0.00	0.03	.53	.58	.51	1039	921.5	117.3	22.7
66.50	0.52	0.00	0.02	.55	.56	.49	1047	921.1	116.7	22.2
66.75	0.53	0.00	0.02	.55	.56	.49	1047	920.7	116.0	21.8
67.00	0.56	0.00	0.02	.58	.53	.47	1057	920.3	115.3	21.4
67.25	0.56	0.00	0.02	.59	.52	.46	1060	919.9	114.7	20.9
67.50	0.53	0.00	0.02	.55	.55	.49	1046	919.5	114.0	20.5
67.75	0.51	0.00	0.02	.53	.57	.51	1038	919.1	113.4	20.0
68.00	0.48	0.00	0.02	.50	.59	.53	1025	918.7	112.7	19.6
68.25	0.47	0.00	0.02	.49	.60	.54	1021	918.3	112.1	19.2
68.50	0.45	0.00	0.02	.47	.61	.56	1013	917.9	111.4	18.7
68.75	0.41	0.00	0.02	.43	.65	.60	994	917.4	110.8	18.3
69.00	0.44	0.00	0.02	.46	.62	.57	1008	917.0	110.1	17.8
69.25	0.43	0.00	0.02	.45	.63	.58	1004	916.6	109.5	17.4
69.50	0.44	0.00	0.02	.46	.61	.57	1008	916.1	108.9	17.0
69.75	0.47	0.00	0.02	.49	.59	.54	1020	915.7	108.2	16.5
70.00	0.48	0.00	0.02	.50	.57	.53	1025	915.3	107.6	16.1
70.25	0.50	0.00	0.02	.52	.56	.51	1032	914.8	106.9	15.7
70.50	0.50	0.00	0.02	.52	.55	.51	1031	914.4	106.3	15.2
70.75	0.53	0.00	0.02	.55	.53	.49	1042	913.9	105.7	14.8
71.00	0.59	0.00	0.02	.61	.48	.44	1062	913.5	105.1	14.3
71.25	0.61	0.00	0.02	.63	.46	.42	1066	913.0	104.4	13.9
71.50	0.63	0.00	0.02	.65	.45	.41	1072	912.6	103.8	13.5
71.75	0.64	0.00	0.02	.66	.44	.40	1074	912.1	103.2	13.0
72.00	0.66	0.00	0.02	.67	.43	.39	1077	911.7	102.6	12.6
72.25	0.65	0.00	0.02	.66	.43	.40	1074	911.2	101.9	12.2
72.50	0.65	0.00	0.02	.67	.43	.39	1076	910.8	101.3	11.7
72.75	0.67	0.00	0.02	.69	.41	.38	1082	910.3	100.7	11.3
73.00	0.66	0.00	0.02	.67	.42	.39	1077	909.8	100.1	10.8
73.25	0.68	0.00	0.01	.69	.41	.38	1081	909.4	99.5	10.4
73.50	0.68	0.00	0.01	.70	.40	.37	1083	908.9	98.8	10.0
73.75	0.69	0.00	0.01	.70	.39	.36	1084	908.5	98.2	9.5
74.00	0.71	0.00	0.01	.72	.38	.35	1089	908.0	97.6	9.1
74.25	0.71	0.00	0.01	.73	.37	.34	1092	907.5	97.0	8.7
74.50	0.73	0.00	0.01	.74	.36	.33	1095	907.1	96.4	8.2
74.75	0.72	0.00	0.01	.73	.36	.34	1091	906.6	95.8	7.8
75.00	0.71	0.00	0.01	.73	.36	.34	1091	906.1	95.2	7.4
75.25	0.74	0.00	0.01	.76	.34	.32	1100	905.7	94.6	6.9
75.50	0.78	0.00	0.01	.79	.32	.30	1107	905.2	94.0	6.5
75.75	0.80	0.00	0.01	.81	.30	.29	1111	904.7	93.4	6.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40076.00	0.82	0.00	0.01	.83	-17.29	-17.28	1115	904.3	92.8	5.6
76.25	0.92	0.00	0.01	.94	.23	.22	1137	903.8	92.2	5.2
76.50	0.88	0.00	0.01	.90	.25	.24	1130	903.3	91.6	4.8
76.75	0.86	0.00	0.01	.87	.26	.25	1122	902.9	91.0	4.3
77.00	0.78	0.00	0.01	.79	.31	.30	1104	902.4	90.4	3.9
77.25	0.72	0.00	0.01	.74	.33	.32	1093	902.0	89.8	3.5
77.50	0.72	0.00	0.01	.74	.33	.32	1093	901.5	89.2	3.0
77.75	0.82	0.00	0.01	.83	.27	.27	1113	901.0	88.6	2.6
78.00	0.86	0.00	0.01	.87	.25	.25	1123	900.6	88.0	2.2
78.25	0.88	0.00	0.01	.90	.23	.23	1129	900.1	87.4	1.7
78.50	0.89	0.00	0.01	.91	.22	.23	1130	899.7	86.8	1.3
78.75	0.89	0.00	0.01	.90	.23	.23	1127	899.2	86.2	0.9
79.00	0.93	0.00	0.01	.94	.21	.21	1134	898.8	85.6	0.4
79.25	0.94	0.00	0.01	.95	.20	.20	1137	898.3	85.0	0.0
79.50	0.92	0.00	0.01	.93	.20	.21	1133	897.9	84.4	-0.4
79.75	0.91	0.00	0.01	.92	.21	.22	1130	897.4	83.8	-0.8
80.00	0.92	0.00	0.01	.94	.20	.21	1133	897.0	83.3	-1.3
80.25	0.94	0.00	0.01	.95	.19	.20	1135	896.5	82.7	-1.7
80.50	0.94	0.00	0.01	.96	.18	.19	1138	896.1	82.1	-2.1
80.75	0.93	0.00	0.01	.95	.18	.20	1136	895.7	81.5	-2.6
81.00	0.94	0.00	0.01	.95	.18	.19	1137	895.2	80.9	-3.0
81.25	1.02	0.00	0.01	1.03	.14	.16	1151	894.8	80.3	-3.4
81.50	1.10	0.00	0.01	1.11	.11	.13	1163	894.4	79.7	-3.9
81.75	1.21	0.00	0.01	1.22	.06	.08	1181	893.9	79.1	-4.3
82.00	1.33	0.00	0.01	1.34	.00	.03	1203	893.5	78.6	-4.7
82.25	1.44	0.00	0.01	1.45	-16.96	-16.99	1220	893.1	78.0	-5.1
82.50	1.52	0.00	0.01	1.53	.93	.96	1230	892.7	77.4	-5.6
82.75	1.54	0.00	0.01	1.55	.92	.95	1233	892.3	76.8	-6.0
83.00	1.55	0.00	0.01	1.56	.91	.95	1235	891.9	76.2	-6.4
83.25	1.63	0.00	0.01	1.65	.89	.92	1245	891.5	75.6	-6.8
83.50	1.63	0.00	0.01	1.65	.88	.92	1246	891.1	75.1	-7.3
83.75	1.64	0.00	0.01	1.66	.87	.91	1248	890.7	74.5	-7.7
84.00	1.61	0.00	0.01	1.62	.89	.92	1243	890.3	73.9	-8.1
84.25	1.56	0.00	0.01	1.58	.89	.93	1239	889.9	73.3	-8.5
84.50	1.59	0.00	0.01	1.61	.88	.92	1242	889.6	72.7	-9.0
84.75	1.62	0.00	0.01	1.63	.87	.91	1244	889.2	72.1	-9.4
85.00	1.74	0.00	0.01	1.76	.83	.87	1262	888.8	71.6	-9.8
85.25	1.79	0.00	0.01	1.80	.81	.86	1267	888.5	71.0	-10.2
85.50	1.70	0.00	0.01	1.71	.84	.89	1255	888.1	70.4	-10.6
85.75	1.51	0.00	0.01	1.52	.89	.94	1233	887.8	69.8	-11.1
86.00	1.49	0.00	0.01	1.50	.90	.95	1228	887.4	69.2	-11.5
86.25	1.40	0.00	0.01	1.42	.92	.97	1216	887.1	68.7	-11.9
86.50	1.35	0.00	0.01	1.36	.94	.99	1207	886.8	68.1	-12.3
86.75	1.31	0.00	0.01	1.33	.95	-17.00	1202	886.5	67.5	-12.7
87.00	1.26	0.00	0.01	1.28	.97	.02	1194	886.1	66.9	-13.2
87.25	1.25	0.00	0.01	1.27	.97	.03	1192	885.8	66.4	-13.6
87.50	1.24	0.00	0.02	1.26	.97	.03	1190	885.5	65.8	-14.0
87.75	1.24	0.00	0.02	1.26	.97	.03	1188	885.3	65.2	-14.4
88.00	1.24	0.00	0.02	1.26	.98	.03	1186	885.0	64.6	-14.8
88.25	1.22	0.00	0.02	1.23	.99	.05	1180	884.7	64.0	-15.2
88.50	1.20	0.00	0.02	1.21	.99	.05	1177	884.5	63.5	-15.7
88.75	1.19	0.00	0.02	1.20	-17.00	.05	1175	884.2	62.9	-16.1
89.00	1.16	0.00	0.02	1.18	.00	.06	1172	884.0	62.3	-16.5
89.25	1.15	0.00	0.02	1.17	.00	.06	1170	883.7	61.7	-16.9
89.50	1.12	0.00	0.02	1.14	.01	.07	1164	883.5	61.2	-17.3
89.75	1.12	0.00	0.02	1.14	.01	.07	1163	883.3	60.6	-17.7
90.00	1.10	0.00	0.02	1.12	.02	.08	1159	883.1	60.0	-18.2
90.25	1.11	0.00	0.02	1.12	.02	.08	1159	882.9	59.4	-18.6
90.50	1.09	0.00	0.02	1.11	.02	.09	1157	882.7	58.8	-19.0
90.75	1.11	0.00	0.02	1.13	.01	.08	1160	882.5	58.3	-19.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40091.00	1.20	0.00	0.02	1.22	-16.97	-17.04	1175	882.4	57.7	-19.8
91.25	1.22	0.00	0.02	1.24	.96	.03	1179	882.2	57.1	-20.2
91.50	1.27	0.00	0.02	1.29	.94	.01	1186	882.1	56.5	-20.7
91.75	1.35	0.00	0.02	1.37	.92	-16.99	1195	882.0	55.9	-21.1
92.00	1.34	0.00	0.02	1.36	.92	.99	1194	881.9	55.4	-21.5
92.25	1.30	0.00	0.02	1.32	.93	-17.00	1190	881.8	54.8	-21.9
92.50	1.26	0.00	0.02	1.28	.94	.01	1184	881.7	54.2	-22.3
92.75	1.20	0.00	0.02	1.22	.97	.03	1172	881.6	53.6	-22.7
93.00	1.12	0.00	0.02	1.15	-17.00	.06	1158	881.5	53.0	-23.1
93.25	1.08	0.00	0.02	1.10	.02	.08	1148	881.5	52.5	-23.6
93.50	1.03	0.00	0.03	1.05	.04	.11	1137	881.5	51.9	-24.0
93.75	1.00	0.00	0.03	1.02	.06	.12	1131	881.4	51.3	-24.4
94.00	0.97	0.00	0.03	1.00	.06	.13	1128	881.4	50.7	-24.8
94.25	0.96	0.00	0.03	.98	.07	.13	1123	881.4	50.1	-25.2
94.50	0.94	0.00	0.03	.97	.08	.14	1120	881.4	49.6	-25.6
94.75	0.92	0.00	0.03	.95	.09	.15	1116	881.5	49.0	-26.0
95.00	0.91	0.00	0.03	.94	.09	.15	1113	881.5	48.4	-26.4
95.25	0.92	0.00	0.03	.95	.08	.15	1115	881.6	47.8	-26.9
95.50	0.92	0.00	0.03	.95	.08	.14	1114	881.7	47.2	-27.3
95.75	0.88	0.00	0.03	.91	.10	.16	1105	881.8	46.6	-27.7
96.00	0.84	0.01	0.03	.88	.12	.18	1098	881.9	46.1	-28.1
96.25	0.81	0.03	0.03	.88	.12	.18	1098	882.0	45.5	-28.5
96.50	0.79	0.05	0.03	.88	.12	.18	1097	882.2	44.9	-28.9
96.75	0.78	0.07	0.03	.88	.12	.18	1096	882.3	44.3	-29.3
97.00	0.77	0.08	0.04	.89	.11	.17	1098	882.5	43.7	-29.7
97.25	0.77	0.10	0.04	.90	.11	.16	1100	882.7	43.1	-30.1
97.50	0.77	0.11	0.04	.92	.10	.15	1104	882.9	42.5	-30.5
97.75	0.75	0.13	0.04	.91	.11	.16	1101	883.1	41.9	-31.0
98.00	0.75	0.14	0.04	.93	.10	.15	1105	883.3	41.4	-31.4
98.25	0.75	0.15	0.04	.94	.09	.14	1107	883.6	40.8	-31.8
98.50	0.77	0.15	0.04	.97	.08	.13	1112	883.8	40.2	-32.2
98.75	0.79	0.16	0.04	1.00	.06	.11	1117	884.1	39.6	-32.6
99.00	0.81	0.17	0.04	1.02	.06	.11	1121	884.4	39.0	-33.0
99.25	0.83	0.18	0.04	1.05	.04	.09	1126	884.7	38.4	-33.4
99.50	1.00	0.19	0.04	1.24	-16.97	.02	1158	885.0	37.8	-33.8
99.75	1.19	0.20	0.04	1.43	.90	-16.95	1186	885.3	37.2	-34.2
40100.00	1.10	0.20	0.04	1.35	.93	.98	1175	885.7	36.6	-34.6
00.25	1.08	0.21	0.05	1.34	.93	.98	1172	886.1	36.0	-35.0
00.50	1.03	0.22	0.05	1.29	.95	-17.00	1164	886.5	35.4	-35.4
00.75	0.88	0.23	0.05	1.16	-17.00	.05	1143	886.9	34.8	-35.9
01.00	0.86	0.23	0.05	1.14	.01	.05	1138	887.3	34.2	-36.3
01.25	0.88	0.24	0.05	1.18	.00	.04	1144	887.7	33.6	-36.7
01.50	0.92	0.25	0.05	1.21	-16.99	.03	1149	888.1	33.0	-37.1
01.75	0.96	0.25	0.05	1.26	.97	.01	1158	888.6	32.4	-37.5
02.00	0.98	0.26	0.05	1.29	.96	.00	1162	889.0	31.8	-37.9
02.25	1.00	0.27	0.05	1.32	.95	-16.98	1166	889.5	31.2	-38.3
02.50	1.01	0.27	0.05	1.34	.94	.98	1169	890.0	30.6	-38.7
02.75	1.06	0.28	0.05	1.39	.93	.96	1176	890.5	30.0	-39.1
03.00	1.14	0.28	0.05	1.48	.90	.93	1188	891.0	29.4	-39.5
03.25	1.10	0.29	0.06	1.44	.91	.94	1183	891.5	28.7	-39.9
03.50	1.01	0.30	0.06	1.36	.94	.97	1171	892.0	28.1	-40.3
03.75	0.99	0.30	0.06	1.35	.94	.97	1170	892.6	27.5	-40.7
04.00	0.98	0.31	0.06	1.35	.95	.97	1168	893.1	26.9	-41.1
04.25	0.95	0.32	0.06	1.33	.96	.98	1164	893.7	26.3	-41.6
04.50	0.94	0.32	0.06	1.32	.96	.98	1163	894.2	25.7	-42.0
04.75	0.94	0.33	0.06	1.33	.96	.98	1164	894.8	25.0	-42.4
40105.00	0.98	0.34	0.06	1.38	-16.94	-16.96	1170	895.4	24.4	-42.8
05.50	1.00	0.35	0.06	1.41	.94	.95	1173	896.5	23.1	-43.6
06.00	0.99	0.36	0.07	1.41	.94	.95	1172	897.7	21.9	-44.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40106.50	1.07	0.37	0.07	1.51	-16.92	-16.92	1183	898.9	20.6	-45.2
07.00	1.47	0.38	0.07	1.92	.82	.81	1228	900.2	19.3	-46.0
07.50	1.70	0.39	0.07	2.16	.76	.76	1253	901.4	18.0	-46.8
40128.00	0.16	0.60	0.10	.86	-17.30	-17.15	1044	952.5	284.3	-75.4
28.25	0.17	0.60	0.10	.87	.30	.14	1046	953.1	281.6	-75.5
28.50	0.16	0.59	0.10	.86	.30	.15	1044	953.7	278.7	-75.6
28.75	0.16	0.59	0.10	.85	.31	.16	1043	954.3	275.8	-75.6
29.00	0.22	0.59	0.10	.91	.28	.13	1057	954.9	272.9	-75.7
29.25	0.22	0.59	0.10	.91	.28	.13	1058	955.5	269.9	-75.7
29.50	0.23	0.59	0.10	.92	.27	.13	1065	956.1	266.8	-75.7
29.75	0.26	0.59	0.10	.94	.27	.12	1069	956.6	263.7	-75.7
40135.00	0.10	0.56	0.09	.74	-17.38	-17.22	1017	967.4	205.0	-70.3
35.25	0.07	0.56	0.09	.71	.40	.23	1008	967.8	203.0	-69.8
35.50	0.05	0.55	0.09	.69	.42	.24	996	968.2	201.0	-69.4
35.75	0.04	0.55	0.09	.67	.43	.25	985	968.6	199.1	-68.9
36.00	0.05	0.55	0.09	.68	.43	.25	990	968.9	197.3	-68.5
36.25	0.05	0.55	0.09	.69	.42	.24	992	969.3	195.5	-68.0
36.50	0.06	0.54	0.08	.69	.43	.24	991	969.6	193.8	-67.5
36.75	0.16	0.54	0.08	.78	.37	.19	1023	969.9	192.1	-67.0
37.00	0.46	0.54	0.08	1.08	.24	.04	1094	970.2	190.5	-66.5
37.25	0.30	0.53	0.08	.92	.31	.11	1056	970.5	188.9	-66.0
37.50	0.15	0.53	0.08	.77	.38	.19	1019	970.8	187.4	-65.5
37.75	0.13	0.53	0.08	.74	.39	.21	1013	971.1	185.9	-65.0
38.00	0.16	0.52	0.08	.76	.38	.20	1017	971.4	184.5	-64.4
38.25	0.16	0.52	0.08	.76	.39	.20	1014	971.6	183.1	-63.9
38.50	0.10	0.52	0.08	.69	.43	.24	992	971.8	181.8	-63.4
38.75	0.10	0.51	0.08	.70	.42	.24	997	972.0	180.4	-62.8
39.00	0.10	0.51	0.08	.69	.43	.24	992	972.2	179.2	-62.3
39.25	0.11	0.51	0.08	.69	.43	.24	991	972.4	177.9	-61.8
39.50	0.13	0.50	0.08	.71	.42	.23	999	972.6	176.7	-61.2
39.75	0.12	0.50	0.08	.70	.42	.24	1000	972.8	175.5	-60.7
40.00	0.13	0.50	0.08	.70	.42	.25	1003	972.9	174.3	-60.1
40.25	0.13	0.49	0.07	.70	.42	.25	1004	973.0	173.2	-59.6
40.50	0.14	0.49	0.07	.70	.42	.25	1003	973.1	172.1	-59.0
40.75	0.16	0.48	0.07	.72	.41	.23	1009	973.2	171.0	-58.4
41.00	0.17	0.48	0.07	.72	.41	.23	1008	973.2	169.9	-57.9
41.25	0.39	0.47	0.07	.93	.31	.12	1060	973.3	168.8	-57.3
41.50	0.63	0.47	0.07	1.17	.22	.00	1103	973.3	167.8	-56.7
41.75	0.75	0.47	0.07	1.28	.18	-16.96	1121	973.3	166.8	-56.2
42.00	0.96	0.46	0.07	1.49	.12	.90	1151	973.3	165.8	-55.6
42.25	0.66	0.46	0.07	1.19	.21	.99	1104	973.3	164.8	-55.0
42.50	0.45	0.45	0.07	.97	.30	-17.09	1060	973.2	163.8	-54.5
42.75	0.37	0.45	0.07	.89	.34	.13	1041	973.2	162.9	-53.9
43.00	0.27	0.45	0.07	.78	.39	.19	1011	973.1	162.0	-53.3
43.25	0.26	0.44	0.06	.77	.40	.20	1009	973.1	161.0	-52.7
43.50	0.23	0.44	0.06	.73	.42	.23	997	973.0	160.1	-52.1
43.75	0.20	0.43	0.06	.69	.44	.25	986	972.9	159.2	-51.6
44.00	0.20	0.43	0.06	.69	.44	.25	985	972.8	158.3	-51.0
44.25	0.17	0.42	0.06	.65	.46	.28	972	972.8	157.5	-50.4
44.50	0.14	0.42	0.06	.62	.48	.31	962	972.5	156.6	-49.8
44.75	0.15	0.41	0.06	.62	.48	.31	962	972.3	155.8	-49.2
45.00	0.16	0.40	0.06	.62	.48	.31	963	972.2	154.9	-48.6
45.25	0.18	0.40	0.06	.63	.47	.30	968	972.0	154.1	-48.0
45.50	0.23	0.39	0.06	.68	.44	.27	985	971.8	153.3	-47.4
45.75	0.30	0.39	0.06	.75	.40	.22	1006	971.6	152.4	-46.8
46.00	0.33	0.38	0.05	.76	.40	.22	1008	971.3	151.6	-46.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40146.25	0.32	0.38	0.05	.75	-17.41	-17.22	1003	971.1	150.8	-45.7
46.50	0.34	0.37	0.05	.76	.40	.22	1005	970.9	150.0	-45.1
46.75	0.36	0.36	0.05	.78	.39	.21	1012	970.6	149.3	-44.5
47.00	0.36	0.36	0.05	.77	.40	.21	1007	970.3	148.5	-43.9
47.25	0.38	0.35	0.05	.78	.39	.20	1008	970.0	147.7	-43.3
47.50	0.39	0.34	0.05	.78	.39	.20	1007	969.8	147.0	-42.7
47.75	0.40	0.34	0.05	.78	.39	.21	1010	969.5	146.2	-42.1
48.00	0.41	0.33	0.05	.79	.38	.21	1015	969.1	145.5	-41.5
48.25	0.42	0.32	0.05	.79	.38	.21	1014	968.8	144.7	-40.9
48.50	0.44	0.31	0.05	.80	.38	.20	1014	968.5	144.0	-40.3
48.75	0.46	0.30	0.04	.81	.38	.19	1014	968.2	143.2	-39.7
49.00	0.52	0.30	0.04	.86	.35	.16	1025	967.8	142.5	-39.1
49.25	0.52	0.29	0.04	.86	.35	.16	1024	967.5	141.8	-38.5
49.50	0.52	0.28	0.04	.84	.36	.17	1019	967.1	141.1	-37.9
49.75	0.53	0.27	0.04	.84	.36	.17	1019	966.7	140.3	-37.3
50.00	0.52	0.26	0.04	.82	.37	.19	1017	966.4	139.6	-36.7
50.25	0.52	0.26	0.04	.81	.37	.20	1017	966.0	138.9	-36.1
50.50	0.50	0.25	0.04	.78	.39	.22	1008	965.6	138.2	-35.5
50.75	0.50	0.24	0.04	.78	.39	.21	1006	965.2	137.5	-34.9
51.00	0.51	0.23	0.04	.78	.39	.21	1005	964.8	136.8	-34.3
51.25	0.54	0.21	0.04	.79	.38	.21	1008	964.4	136.1	-33.7
51.50	0.56	0.20	0.04	.80	.37	.21	1011	964.0	135.5	-33.1
51.75	0.58	0.19	0.03	.80	.38	.20	1010	963.6	134.8	-32.5
52.00	0.59	0.18	0.03	.80	.38	.20	1008	963.2	134.1	-31.9
52.25	0.58	0.16	0.03	.78	.39	.22	1002	962.8	133.4	-31.3
52.50	0.62	0.15	0.03	.80	.37	.20	1008	962.3	132.7	-30.7
52.75	0.66	0.13	0.03	.83	.36	.19	1015	961.9	132.1	-30.1
53.00	0.74	0.12	0.03	.89	.33	.15	1029	961.5	131.4	-29.5
53.25	0.86	0.10	0.03	1.00	.28	.10	1054	961.0	130.7	-28.9
53.50	0.98	0.09	0.03	1.10	.24	.06	1076	960.6	130.1	-28.3
53.75	1.05	0.07	0.03	1.15	.22	.04	1083	960.1	129.4	-27.7
54.00	1.27	0.05	0.03	1.35	.15	-16.96	1114	959.7	128.7	-27.1
54.25	1.20	0.03	0.03	1.26	.18	-17.00	1100	959.2	128.1	-26.5
54.50	1.22	0.02	0.02	1.26	.18	.00	1100	958.7	127.4	-25.9
54.75	1.02	0.00	0.02	1.04	.26	.08	1059	958.3	126.8	-25.3
55.00	0.98	0.00	0.02	1.01	.27	.09	1053	957.8	126.1	-24.7
55.25	0.99	0.00	0.02	1.01	.27	.09	1053	957.3	125.5	-24.1
55.50	0.99	0.00	0.02	1.02	.26	.09	1055	956.9	124.8	-23.5
55.75	1.00	0.00	0.02	1.02	.26	.09	1055	956.4	124.2	-22.9
56.00	1.10	0.00	0.02	1.12	.22	.05	1074	955.9	123.6	-22.3
56.25	1.14	0.00	0.02	1.16	.21	.03	1081	955.5	122.9	-21.7
56.50	1.17	0.00	0.02	1.19	.19	.02	1086	955.0	122.3	-21.1
56.75	1.21	0.00	0.02	1.23	.18	.00	1092	954.5	121.6	-20.5
57.00	1.23	0.00	0.02	1.23	.18	.01	1093	954.1	121.0	-19.9
57.25	1.17	0.00	0.02	1.18	.19	.03	1084	953.6	120.4	-19.3
57.50	1.21	0.00	0.02	1.22	.18	.01	1091	953.1	119.7	-18.6
57.75	1.25	0.00	0.02	1.26	.16	.00	1097	952.6	119.1	-18.0
58.00	1.30	0.00	0.01	1.31	.14	-16.98	1104	952.1	118.5	-17.4
58.25	1.37	0.00	0.01	1.39	.12	.94	1116	951.7	117.8	-16.8
58.50	1.76	0.00	0.01	1.78	.01	.83	1163	951.2	117.2	-16.2
58.75	2.32	0.00	0.01	2.33	-16.88	.70	1214	950.7	116.6	-15.6
59.00	1.98	0.00	0.01	1.99	.95	.76	1189	950.2	116.0	-15.0
59.25	1.57	0.00	0.01	1.58	-17.05	.87	1144	949.7	115.3	-14.4
59.50	1.22	0.00	0.01	1.24	.16	.98	1095	949.2	114.7	-13.8
59.75	1.39	0.00	0.01	1.40	.10	.93	1120	948.8	114.1	-13.2
60.00	1.69	0.00	0.01	1.70	.01	.84	1157	948.3	113.5	-12.6
60.25	2.24	0.00	0.01	2.25	-16.89	.71	1209	947.8	112.9	-12.0
60.50	2.48	0.00	0.01	2.49	.84	.66	1230	947.3	112.2	-11.5
60.75	2.92	0.00	0.01	2.92	.75	.57	1265	946.8	111.6	-10.9
61.00	2.46	0.00	0.01	2.47	.82	.64	1238	946.4	111.0	-10.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40161.25	1.87	0.00	0.01	1.88	-16.95	-16.78	1179	945.9	110.4	-9.7
61.50	1.98	0.00	0.01	1.98	.94	.77	1184	945.4	109.8	-9.1
61.75	2.68	0.00	0.01	2.68	.79	.62	1244	944.9	109.2	-8.5
62.00	3.48	0.00	0.01	3.49	.65	.48	1305	944.5	108.6	-7.9
62.25	2.92	0.00	0.01	2.93	.73	.56	1271	944.0	107.9	-7.3
62.50	1.67	0.00	0.01	1.67	.99	.82	1161	943.5	107.3	-6.7
62.75	1.50	0.00	0.01	1.50	-17.04	.89	1135	943.1	106.7	-6.1
63.00	1.41	0.00	0.01	1.42	.07	.91	1124	942.6	106.1	-5.5
63.25	1.51	0.00	0.01	1.51	.04	.88	1137	942.1	105.5	-4.9
63.50	1.34	0.00	0.01	1.35	.09	.94	1113	941.7	104.9	-4.3
63.75	1.35	0.00	0.01	1.36	.09	.94	1113	941.2	104.3	-3.7
64.00	1.37	0.00	0.01	1.38	.08	.94	1114	940.7	103.7	-3.1
64.25	1.31	0.00	0.01	1.32	.10	.96	1105	940.3	103.1	-2.5
64.50	1.29	0.00	0.01	1.29	.11	.97	1102	939.8	102.5	-1.9
64.75	1.24	0.00	0.01	1.25	.12	.98	1096	939.4	101.9	-1.4
65.00	1.19	0.00	0.01	1.20	.13	-17.00	1088	938.9	101.2	-0.8
65.25	1.11	0.00	0.01	1.11	.17	.04	1070	938.5	100.6	-0.2
65.50	1.06	0.00	0.01	1.07	.18	.06	1061	938.0	100.0	0.4
65.75	1.07	0.00	0.01	1.08	.18	.06	1063	937.6	99.4	1.0
66.00	1.08	0.00	0.01	1.09	.17	.05	1065	937.1	98.8	1.6
66.25	1.12	0.00	0.01	1.12	.16	.04	1071	936.7	98.2	2.2
66.50	1.12	0.00	0.01	1.13	.15	.04	1073	936.3	97.6	2.7
66.75	1.17	0.00	0.01	1.18	.13	.02	1082	935.8	97.0	3.3
67.00	1.20	0.00	0.01	1.21	.12	.01	1087	935.4	96.4	3.9
67.25	1.33	0.00	0.01	1.34	.07	-16.95	1108	935.0	95.8	4.5
67.50	1.52	0.00	0.01	1.53	.01	.89	1134	934.5	95.2	5.1
67.75	1.44	0.00	0.01	1.45	.03	.92	1123	934.1	94.6	5.7
68.00	1.36	0.00	0.01	1.37	.06	.95	1112	933.7	94.0	6.3
68.25	1.27	0.00	0.01	1.28	.08	.99	1099	933.3	93.4	6.8
68.50	1.34	0.00	0.01	1.35	.06	.96	1109	932.9	92.8	7.4
68.75	1.48	0.00	0.01	1.49	.01	.91	1128	932.5	92.2	8.0
69.00	1.64	0.00	0.01	1.65	-16.97	.86	1148	932.1	91.6	8.6
69.25	1.70	0.00	0.01	1.71	.95	.84	1156	931.7	91.0	9.2
69.50	1.67	0.00	0.01	1.68	.95	.84	1154	931.3	90.4	9.7
69.75	1.60	0.00	0.01	1.62	.96	.86	1147	930.9	89.8	10.3
70.00	1.59	0.00	0.01	1.60	.97	.87	1144	930.5	89.2	10.9
70.25	1.45	0.00	0.01	1.46	-17.01	.91	1125	930.1	88.6	11.5
70.50	1.49	0.00	0.01	1.50	.00	.90	1131	929.8	88.0	12.1
70.75	1.53	0.00	0.01	1.54	-16.98	.88	1137	929.4	87.4	12.7
71.00	1.55	0.00	0.01	1.56	.97	.88	1139	929.0	86.8	13.2
71.25	1.60	0.00	0.01	1.61	.96	.86	1146	928.7	86.2	13.8
71.50	1.53	0.00	0.01	1.55	.97	.87	1139	928.3	85.6	14.4
71.75	1.45	0.00	0.02	1.47	-17.00	.90	1128	928.0	85.0	15.0
72.00	1.43	0.00	0.02	1.45	.00	.91	1124	927.6	84.4	15.6
72.25	1.40	0.00	0.02	1.42	.01	.92	1120	927.3	83.8	16.1
72.50	1.38	0.00	0.02	1.40	.01	.93	1117	926.9	83.2	16.7
72.75	1.37	0.00	0.02	1.39	.02	.93	1116	926.6	82.6	17.3
73.00	1.38	0.00	0.02	1.40	.01	.93	1117	926.3	82.0	17.9
73.25	1.39	0.00	0.02	1.41	.01	.93	1119	926.0	81.4	18.4
73.50	1.39	0.00	0.02	1.41	.01	.93	1118	925.7	80.8	19.0
73.75	1.39	0.00	0.02	1.41	.00	.92	1118	925.4	80.2	19.6
74.00	1.38	0.00	0.02	1.40	.00	.92	1117	925.1	79.6	20.2
74.25	1.37	0.00	0.02	1.39	.01	.93	1115	924.8	79.0	20.7
74.50	1.38	0.00	0.02	1.40	.00	.93	1117	924.5	78.4	21.3
74.75	1.36	0.00	0.02	1.38	.01	.93	1114	924.2	77.7	21.9
75.00	1.35	0.00	0.02	1.37	.01	.93	1113	923.9	77.1	22.5
75.25	1.37	0.00	0.02	1.39	.00	.92	1116	923.7	76.5	23.0
75.50	1.38	0.00	0.02	1.41	-16.99	.92	1119	923.4	75.9	23.6
75.75	1.39	0.00	0.02	1.42	.99	.92	1120	923.2	75.3	24.2
76.00	1.41	0.00	0.03	1.44	.98	.91	1123	922.9	74.7	24.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40176.25	1.45	0.00	0.03	1.47	-16.97	-16.90	1127	922.7	74.1	25.3
76.50	1.58	0.00	0.03	1.61	.93	.86	1145	922.5	73.5	25.9
76.75	1.34	0.00	0.03	1.86	.86	.78	1175	922.2	72.9	26.4
77.00	1.63	0.00	0.03	1.86	.86	.78	1177	922.0	72.3	27.0
77.25	1.76	0.00	0.03	1.78	.88	.80	1167	921.8	71.7	27.6
77.50	1.67	0.00	0.03	1.70	.90	.82	1157	921.6	71.1	28.1
77.75	1.78	0.00	0.03	1.81	.87	.80	1170	921.4	70.5	28.7
78.00	1.84	0.00	0.03	1.87	.85	.78	1178	921.2	69.9	29.3
78.25	1.99	0.00	0.03	2.02	.81	.74	1195	921.1	69.3	29.8
78.50	1.80	0.00	0.03	1.83	.85	.78	1176	920.9	68.6	30.4
78.75	1.54	0.00	0.03	1.57	.92	.85	1144	920.7	68.0	30.9
79.00	1.53	0.00	0.03	1.56	.92	.85	1143	920.6	67.4	31.5
79.25	1.49	0.00	0.03	1.53	.93	.86	1139	920.4	66.8	32.1
79.50	1.36	0.00	0.03	1.39	.97	.90	1119	920.3	66.2	32.6
79.75	1.27	0.00	0.03	1.30	-17.00	.93	1106	920.2	65.6	33.2
80.00	1.26	0.00	0.03	1.30	.00	.93	1104	920.0	65.0	33.7
80.25	1.37	0.00	0.03	1.40	-16.97	.90	1118	919.9	64.4	34.3
80.50	1.50	0.00	0.03	1.53	.93	.86	1137	919.8	63.7	34.8
80.75	1.81	0.00	0.03	1.85	.84	.77	1178	919.7	63.1	35.4
81.00	1.76	0.00	0.04	1.80	.85	.78	1173	919.6	62.5	36.0
81.25	1.52	0.00	0.04	1.56	.92	.85	1141	919.6	61.9	36.5
81.50	1.50	0.00	0.04	1.54	.92	.86	1137	919.5	61.3	37.1
81.75	1.43	0.00	0.04	1.46	.94	.88	1126	919.4	60.7	37.6
82.00	1.62	0.00	0.04	1.66	.89	.82	1153	919.4	60.0	38.2
82.25	1.51	0.00	0.04	1.54	.92	.86	1138	919.3	59.4	38.7
82.50	1.31	0.00	0.04	1.35	.98	.92	1109	919.3	58.8	39.3
82.75	1.32	0.00	0.04	1.36	.97	.91	1111	919.3	58.2	39.8
83.00	1.37	0.00	0.04	1.41	.96	.90	1118	919.2	57.6	40.4
83.25	1.42	0.00	0.04	1.46	.94	.88	1126	919.2	56.9	40.9
83.50	1.37	0.00	0.04	1.41	.96	.89	1118	919.2	56.3	41.5
83.75	1.35	0.00	0.04	1.39	.96	.90	1115	919.2	55.7	42.0
84.00	1.33	0.00	0.04	1.37	.97	.91	1111	919.2	55.1	42.6
84.25	1.32	0.00	0.04	1.36	.97	.91	1110	919.3	54.4	43.1
84.50	1.37	0.00	0.04	1.41	.95	.90	1117	919.3	53.8	43.7
84.75	1.41	0.00	0.04	1.45	.94	.88	1123	919.3	53.2	44.3
85.00	1.68	0.00	0.04	1.72	.87	.81	1159	919.4	52.5	44.8
85.25	1.77	0.00	0.04	1.81	.84	.78	1170	919.4	51.9	45.3
85.50	1.64	0.00	0.04	1.68	.87	.82	1154	919.5	51.3	45.9
85.75	1.58	0.00	0.04	1.62	.89	.83	1146	919.5	50.7	46.4
86.00	1.54	0.00	0.04	1.60	.90	.84	1144	919.6	50.0	47.0
86.25	1.51	0.00	0.04	1.55	.91	.85	1137	919.7	49.4	47.5
86.50	1.42	0.00	0.04	1.46	.93	.88	1124	919.8	48.7	48.1
86.75	1.35	0.00	0.04	1.39	.96	.89	1113	919.9	48.1	48.6
87.00	1.42	0.00	0.04	1.47	.93	.87	1125	920.0	47.5	49.1
87.25	1.48	0.03	0.04	1.56	.90	.84	1138	920.1	46.8	49.7
87.50	1.39	0.07	0.04	1.50	.92	.86	1129	920.2	46.2	50.2
87.75	1.28	0.10	0.04	1.43	.94	.88	1118	920.4	45.5	50.8
88.00	1.36	0.13	0.04	1.53	.91	.85	1133	920.5	44.9	51.3
88.25	1.54	0.15	0.04	1.74	.86	.79	1161	920.6	44.2	51.8
88.50	1.26	0.18	0.04	1.48	.93	.86	1126	920.8	43.6	52.4
88.75	1.12	0.20	0.04	1.36	.96	.90	1106	921.0	43.0	52.9
89.00	1.06	0.21	0.04	1.32	.97	.91	1099	921.1	42.3	53.5
89.25	1.04	0.23	0.04	1.32	.97	.91	1099	921.3	41.6	54.0
89.50	1.01	0.25	0.04	1.30	.98	.92	1096	921.5	41.0	54.5
89.75	0.94	0.27	0.05	1.25	-17.00	.94	1087	921.7	40.3	55.1
90.00	0.89	0.28	0.05	1.22	.01	.95	1081	921.9	39.7	55.6
90.25	0.87	0.29	0.05	1.21	.01	.95	1081	922.1	39.0	56.1
90.50	0.85	0.31	0.05	1.20	.01	.95	1079	922.3	38.4	56.7
90.75	0.76	0.32	0.05	1.12	.04	.98	1061	922.5	37.7	57.2
91.00	0.86	0.33	0.05	1.24	.00	.94	1084	922.7	37.0	57.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40191.25	0.90	0.34	0.05	1.28	-16.99	-16.92	1090	922.9	36.4	55.3
91.50	1.09	0.35	0.05	1.49	.92	.86	1125	923.2	35.7	58.8
91.75	1.36	0.36	0.05	1.77	.85	.78	1164	923.4	35.0	59.3
92.00	1.24	0.37	0.05	1.65	.88	.81	1148	923.7	34.3	59.9
92.25	1.05	0.38	0.05	1.48	.92	.86	1125	923.9	33.7	60.4
92.50	1.03	0.39	0.05	1.46	.93	.86	1121	924.2	33.0	60.9
92.75	0.98	0.40	0.05	1.43	.94	.87	1115	924.5	32.3	61.5
93.00	1.03	0.40	0.05	1.49	.92	.85	1124	924.7	31.6	62.0
93.25	1.12	0.41	0.05	1.59	.89	.82	1138	925.0	30.9	62.5
93.50	1.12	0.42	0.05	1.58	.90	.83	1136	925.3	30.2	63.0
93.75	1.11	0.43	0.05	1.59	.90	.82	1138	925.6	29.5	63.6
94.00	1.07	0.43	0.05	1.55	.91	.83	1131	925.9	28.9	64.1
94.25	1.03	0.44	0.05	1.52	.92	.84	1126	926.2	28.2	64.6
94.50	1.01	0.45	0.05	1.51	.92	.84	1124	926.5	27.5	65.2
94.75	0.99	0.45	0.05	1.50	.92	.85	1122	926.8	26.7	65.7
95.00	0.98	0.46	0.05	1.49	.93	.85	1121	927.1	26.0	66.2
95.25	0.98	0.47	0.05	1.50	.92	.85	1122	927.5	25.3	66.7
95.50	1.03	0.47	0.05	1.56	.91	.83	1131	927.8	24.6	67.2
95.75	1.06	0.48	0.05	1.58	.90	.82	1134	928.1	23.9	67.8
96.00	0.88	0.48	0.05	1.42	.95	.87	1108	928.5	23.2	68.3
96.25	0.74	0.49	0.05	1.28	.99	.91	1081	928.8	22.4	68.8
96.50	0.56	0.49	0.05	1.11	-17.05	.97	1044	929.2	21.7	69.3
96.75	0.52	0.50	0.05	1.07	.07	.99	1036	929.5	21.0	69.8
97.00	0.47	0.50	0.05	1.02	.08	-17.01	1024	929.9	20.3	70.4
97.25	0.39	0.51	0.05	.95	.12	.04	1005	930.3	19.5	70.9
97.50	0.37	0.51	0.05	.93	.12	.05	1000	930.6	18.8	71.4
97.75	0.40	0.51	0.05	.97	.10	.03	1011	931.0	18.0	71.9
98.00	0.48	0.52	0.06	1.05	.07	.00	1031	931.4	17.3	72.4
98.25	0.60	0.52	0.06	1.18	.02	-16.94	1061	931.8	16.5	72.9
98.50	0.57	0.53	0.06	1.15	.04	.96	1053	932.2	15.7	73.4
98.75	0.46	0.53	0.06	1.04	.08	-17.00	1025	932.5	15.0	73.9
99.00	0.44	0.53	0.06	1.02	.09	.23	1020	932.9	14.2	74.5
99.25	0.42	0.53	0.06	1.01	.09	.23	1018	933.3	13.4	75.0
99.50	0.41	0.54	0.06	1.00	.09	.22	1017	933.8	12.6	75.5
99.75	0.40	0.54	0.06	1.00	.09	.22	1017	934.2	11.8	76.0
40200.00	0.40	0.55	0.06	1.00	.09	.23	1014	934.6	11.0	76.5
00.25	0.48	0.55	0.06	1.09	.06	.20	1035	935.0	10.2	77.0
00.50	0.47	0.55	0.06	1.08	.07	.21	1031	935.4	9.4	77.5
00.75	0.47	0.55	0.06	1.08	.07	.20	1032	935.8	8.6	78.0
01.00	0.44	0.56	0.06	1.06	.07	.20	1029	936.3	7.8	78.5
01.25	0.44	0.56	0.06	1.06	.07	.20	1029	936.7	6.9	79.0
01.50	0.43	0.56	0.06	1.05	.07	.20	1028	937.1	6.1	79.5
01.75	0.43	0.57	0.06	1.06	.07	.19	1031	937.6	5.2	80.0
02.00	0.43	0.57	0.06	1.06	.07	.20	1028	938.0	4.4	80.5
02.25	0.41	0.57	0.06	1.04	.08	.21	1021	938.4	3.5	81.0
02.50	0.39	0.57	0.06	1.03	.09	.21	1020	938.9	2.6	81.5
02.75	0.38	0.58	0.06	1.02	.08	.20	1020	939.3	1.7	82.0
03.00	0.35	0.58	0.06	.99	.10	.21	1012	939.8	0.8	82.5
03.25	0.33	0.58	0.06	.97	.11	.22	1006	940.2	359.9	83.0
03.50	0.32	0.58	0.06	.96	.11	.22	1005	940.7	359.0	83.5
03.75	0.31	0.58	0.06	.95	.11	.22	1002	941.2	358.1	83.9
04.00	0.30	0.58	0.06	.95	.12	.23	1000	941.6	357.1	84.4
04.25	0.29	0.59	0.06	.93	.12	.23	996	942.1	356.2	84.9
04.50	0.26	0.59	0.06	.91	.13	.23	992	942.5	355.2	85.4
04.75	0.25	0.59	0.06	.90	.13	.24	989	943.0	354.2	85.9
05.00	0.25	0.59	0.06	.89	.14	.24	986	943.5	353.2	86.3
05.25	0.24	0.59	0.06	.89	.14	.24	985	943.9	352.2	86.8
05.50	0.23	0.59	0.06	.88	.15	.25	980	944.4	351.2	87.3
05.75	0.22	0.59	0.06	.87	.15	.25	977	944.9	350.2	87.7
06.00	0.22	0.59	0.06	.87	.15	.25	976	945.4	349.1	88.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40206.25	0.23	0.59	0.06	.88	-17.15	-17.25	978	945.8	348.0	88.7
06.50	0.24	0.59	0.06	.89	.14	.24	982	946.3	346.9	89.1
06.75	0.25	0.59	0.06	.90	.14	.23	987	946.8	345.8	89.6
07.00	0.25	0.59	0.06	.90	.14	.23	987	947.3	344.7	90.0
07.25	0.29	0.59	0.06	.95	.11	.21	1002	947.8	343.5	90.5
07.50	0.26	0.59	0.06	.94	.12	.21	1002	948.2	342.3	90.9
07.75	0.27	0.59	0.06	.92	.12	.21	999	948.7	341.1	91.4
08.00	0.27	0.59	0.06	.93	.12	.21	1003	949.2	339.9	91.8
08.25	0.26	0.59	0.06	.91	.13	.22	995	949.7	338.6	92.3
08.50	0.26	0.59	0.06	.93	.12	.21	1000	950.2	337.3	92.7
08.75	0.30	0.59	0.06	.95	.11	.20	1006	950.6	336.0	93.1
09.00	0.30	0.59	0.06	.96	.11	.20	1008	951.1	334.6	93.6
09.25	0.31	0.59	0.06	.96	.11	.20	1006	951.6	333.2	94.0
09.50	0.30	0.59	0.06	.95	.12	.20	1003	952.1	331.7	94.4
09.75	0.30	0.59	0.06	.95	.12	.20	1004	952.6	330.2	94.8
10.00	0.31	0.59	0.06	.95	.12	.20	1003	953.1	328.7	95.3
10.25	0.31	0.59	0.06	.96	.11	.20	1008	953.6	327.1	95.7
10.50	0.33	0.59	0.06	.97	.11	.19	1014	954.0	325.5	96.1
10.75	0.34	0.59	0.06	.99	.10	.18	1021	954.5	323.8	96.5
11.00	0.36	0.59	0.06	1.01	.09	.17	1028	955.0	322.1	96.8
11.25	0.35	0.59	0.06	.99	.10	.18	1021	955.5	320.3	97.2
11.50	0.33	0.59	0.06	.97	.11	.19	1012	956.0	318.5	97.6
11.75	0.34	0.58	0.06	.98	.11	.19	1015	956.5	316.6	97.9
12.00	0.37	0.58	0.05	1.00	.10	.18	1020	956.9	314.6	98.3
12.25	0.58	0.58	0.05	1.21	.02	.10	1076	957.4	312.6	98.6
12.50	0.36	0.58	0.05	1.00	.11	.18	1020	957.9	310.5	99.0
12.75	0.28	0.58	0.05	.91	.14	.22	994	958.4	308.4	99.3
13.00	0.27	0.58	0.05	.90	.15	.22	992	958.8	306.1	99.6
13.25	0.27	0.57	0.05	.90	.15	.22	994	959.3	303.8	99.9
13.50	0.27	0.57	0.05	.89	.15	.22	990	959.8	301.4	100.2
13.75	0.32	0.57	0.05	.94	.13	.20	1005	960.3	298.9	100.4
14.00	0.42	0.57	0.05	1.04	.09	.16	1034	960.7	296.4	100.7
14.25	0.52	0.57	0.05	1.14	.05	.12	1064	961.2	293.8	100.9
40216.50	0.34	0.54	0.05	.93	-17.14	-17.20	1011	965.3	266.9	102.2
16.75	0.37	0.53	0.05	.96	.13	.19	1022	965.8	263.7	102.2
17.00	0.41	0.53	0.05	.99	.11	.17	1031	966.2	260.5	102.2
17.25	0.42	0.53	0.05	.99	.12	.18	1031	966.6	257.2	102.2
17.50	0.46	0.52	0.04	1.03	.11	.16	1040	967.1	254.0	102.1
17.75	0.41	0.52	0.04	.98	.13	.19	1025	967.5	250.8	102.0
18.00	0.36	0.52	0.04	.92	.15	.21	1009	967.9	247.7	101.9
18.25	0.34	0.51	0.04	.89	.17	.22	1002	968.4	244.6	101.8
18.50	0.32	0.51	0.04	.87	.18	.23	995	968.8	241.5	101.7
18.75	0.31	0.50	0.04	.86	.18	.24	991	969.2	238.5	101.5
19.00	0.27	0.50	0.04	.81	.21	.26	974	969.6	235.6	101.3
19.25	0.24	0.50	0.04	.78	.23	.28	964	970.0	232.7	101.1
19.50	0.25	0.49	0.04	.78	.23	.28	966	970.5	230.0	100.9
19.75	0.38	0.49	0.04	.91	.16	.21	1012	970.9	227.3	100.6
20.00	0.41	0.48	0.04	.93	.16	.20	1018	971.3	224.6	100.4
20.25	0.36	0.48	0.04	.88	.18	.23	1003	971.7	222.1	100.1
20.50	0.33	0.48	0.04	.85	.19	.24	994	972.0	219.6	99.8
20.75	0.31	0.47	0.04	.82	.21	.26	984	972.4	217.3	99.5
21.00	0.30	0.47	0.04	.80	.22	.27	978	972.8	215.0	99.1
21.25	0.28	0.46	0.04	.78	.23	.28	970	973.2	212.7	98.8
21.50	0.25	0.46	0.04	.75	.25	.30	961	973.6	210.6	98.5
21.75	0.22	0.45	0.03	.71	.28	.32	946	973.9	208.5	98.1
22.00	0.25	0.45	0.03	.73	.27	.31	953	974.3	206.5	97.7
22.25	0.29	0.44	0.03	.76	.25	.29	965	974.7	204.5	97.3
22.50	0.27	0.44	0.03	.74	.26	.30	960	975.0	202.7	97.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40222.75	0.26	0.43	0.03	.73	-17.27	-17.31	957	975.4	200.8	96.6
23.00	0.25	0.43	0.03	.71	.28	.32	950	975.7	199.1	96.2
23.25	0.26	0.42	0.03	.72	.27	.32	956	976.1	197.4	95.7
23.50	0.29	0.42	0.03	.74	.26	.30	965	976.4	195.7	95.3
23.75	0.28	0.41	0.03	.72	.28	.32	958	976.7	194.1	94.9
24.00	0.29	0.41	0.03	.73	.27	.31	963	977.0	192.6	94.5
24.25	0.30	0.40	0.03	.73	.27	.31	964	977.4	191.0	94.0
24.50	0.30	0.39	0.03	.72	.28	.32	961	977.7	189.6	93.6
24.75	0.30	0.39	0.03	.71	.29	.32	958	978.0	188.1	93.1
25.00	0.32	0.39	0.02	.73	.28	.31	967	978.3	186.7	92.7
25.25	0.31	0.38	0.02	.71	.29	.33	959	978.6	185.4	92.2
25.50	0.33	0.37	0.02	.73	.28	.31	969	978.9	184.0	91.7
25.75	0.32	0.37	0.02	.71	.29	.33	961	979.1	182.7	91.3
26.00	0.33	0.36	0.02	.71	.29	.33	961	979.4	181.5	90.8
26.25	0.34	0.36	0.02	.72	.29	.32	966	979.7	180.2	90.3
26.50	0.37	0.35	0.02	.74	.28	.31	975	979.9	179.0	89.8
26.75	0.37	0.34	0.02	.73	.28	.32	972	980.2	177.8	89.4
27.00	0.38	0.34	0.02	.74	.28	.31	977	980.5	176.7	88.9
27.25	0.38	0.33	0.02	.73	.29	.32	974	980.7	175.5	88.4
27.50	0.40	0.32	0.02	.74	.28	.32	979	980.9	174.4	87.9
27.75	0.39	0.32	0.02	.73	.29	.32	975	981.2	173.3	87.4
28.00	0.40	0.31	0.01	.73	.29	.32	976	981.4	172.2	86.9
28.25	0.40	0.30	0.01	.71	.31	.34	968	981.6	171.2	86.4
28.50	0.40	0.30	0.01	.71	.31	.34	967	981.8	170.1	85.9
28.75	0.44	0.29	0.01	.75	.29	.32	981	982.0	169.1	85.4
29.00	0.43	0.28	0.01	.73	.31	.34	974	982.2	168.1	84.9
29.25	0.43	0.28	0.01	.72	.31	.34	970	982.4	167.1	84.3
29.50	0.43	0.27	0.01	.71	.32	.35	967	982.6	166.1	83.8
29.75	0.42	0.27	0.01	.70	.33	.36	965	982.7	165.2	83.3
30.00	0.43	0.26	0.01	.70	.33	.36	965	982.9	164.2	82.8
30.25	0.41	0.25	0.01	.67	.35	.38	952	983.1	163.3	82.3
30.50	0.38	0.25	0.01	.64	.37	.40	941	983.2	162.3	81.7
30.75	0.36	0.24	0.01	.60	.40	.43	926	983.3	161.4	81.2
31.00	0.36	0.23	0.00	.60	.40	.43	927	983.5	160.5	80.7
31.25	0.37	0.23	0.00	.60	.40	.43	927	983.6	159.6	80.2
31.50	0.38	0.22	0.00	.60	.40	.43	929	983.7	158.7	79.6
31.75	0.38	0.21	0.00	.59	.41	.44	925	983.8	157.9	79.1
32.00	0.37	0.21	0.00	.58	.42	.45	921	983.9	157.0	78.6
32.25	0.38	0.20	0.00	.58	.42	.45	924	984.0	156.2	78.0
32.50	0.40	0.19	0.00	.59	.41	.44	929	984.1	155.3	77.5
32.75	0.41	0.18	0.00	.59	.41	.44	929	984.2	154.5	77.0
33.00	0.41	0.18	0.00	.59	.42	.44	929	984.3	153.7	76.4
33.25	0.42	0.17	0.00	.59	.42	.45	930	984.3	152.8	75.9
33.50	0.42	0.16	-0.01	.58	.43	.45	927	984.4	152.0	75.4
33.75	0.44	0.16	-0.01	.59	.42	.45	932	984.4	151.2	74.8
34.00	0.45	0.15	-0.01	.59	.42	.45	934	984.4	150.4	74.3
34.25	0.45	0.14	-0.01	.59	.42	.45	938	984.5	149.6	73.7
34.50	0.46	0.13	-0.01	.59	.42	.45	939	984.5	148.8	73.2
34.75	0.46	0.13	-0.01	.57	.44	.46	930	984.5	148.1	72.6
35.00	0.46	0.12	-0.01	.57	.44	.46	932	984.5	147.3	72.1
35.25	0.49	0.11	-0.01	.59	.42	.45	940	984.5	146.5	71.5
35.50	0.49	0.10	-0.01	.58	.44	.46	934	984.5	145.8	71.0
35.75	0.49	0.10	-0.01	.57	.44	.47	932	984.5	145.0	70.4
36.00	0.49	0.09	-0.01	.56	.45	.48	928	984.4	144.3	69.9
36.25	0.54	0.08	-0.02	.61	.42	.45	950	984.4	143.5	69.3
36.50	0.51	0.07	-0.02	.56	.46	.49	927	984.3	142.8	68.8
36.75	0.54	0.07	-0.02	.59	.43	.46	945	984.3	142.0	68.2
37.00	0.61	0.06	-0.02	.65	.39	.42	973	984.2	141.3	67.7
37.25	0.58	0.05	-0.02	.61	.42	.45	956	984.1	140.6	67.1
37.50	0.58	0.04	-0.02	.61	.42	.45	958	984.1	139.8	66.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_B$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40237.75	0.61	0.04	-0.02	.63	-17.41	-17.44	967	984.0	139.1	66.0
38.00	0.64	0.03	-0.02	.65	.40	.43	978	983.9	138.4	65.5
38.25	0.70	0.02	-0.02	.70	.37	.40	999	983.8	137.7	64.9
38.50	0.62	0.01	-0.02	.61	.43	.46	957	983.7	137.0	64.3
38.75	0.61	0.00	-0.02	.59	.45	.48	950	983.5	136.3	63.8
39.00	0.61	0.00	-0.02	.59	.45	.48	950	983.4	135.6	63.2
39.25	0.52	-0.01	-0.02	.49	.53	.56	899	983.3	134.9	62.7
39.50	0.53	-0.02	-0.03	.48	.54	.57	894	983.1	134.2	62.1
39.75	0.54	-0.02	-0.03	.49	.53	.56	901	983.0	133.5	61.5
40.00	0.58	-0.03	-0.03	.52	.50	.54	920	982.8	132.8	61.0
40.25	0.58	-0.04	-0.03	.51	.51	.54	916	982.6	132.1	60.4
40.50	0.56	-0.04	-0.03	.49	.53	.56	908	982.5	131.4	59.8
40.75	0.55	-0.05	-0.03	.47	.54	.58	900	982.3	130.7	59.3
41.00	0.56	-0.06	-0.03	.46	.55	.59	895	982.1	130.0	58.7
41.25	0.56	-0.07	-0.03	.46	.56	.59	895	981.9	129.4	58.1
41.50	0.56	-0.07	-0.03	.46	.55	.59	898	981.7	128.7	57.6
41.75	0.55	-0.08	-0.03	.43	.58	.61	883	981.5	128.0	57.0
42.00	0.56	-0.09	-0.03	.44	.57	.61	889	981.2	127.3	56.4
42.25	0.56	-0.09	-0.03	.43	.58	.62	884	981.0	126.7	55.9
42.50	0.58	-0.10	-0.03	.45	.56	.60	899	980.8	126.0	55.3
42.75	0.58	-0.11	-0.03	.44	.57	.60	897	980.5	125.3	54.7
43.00	0.59	-0.11	-0.03	.44	.57	.60	899	980.3	124.7	54.2
43.25	0.58	-0.12	-0.04	.43	.58	.62	894	980.0	124.0	53.6
43.50	0.59	-0.12	-0.04	.43	.58	.62	896	979.8	123.4	53.0
43.75	0.60	-0.13	-0.04	.43	.58	.62	897	979.5	122.7	52.4
44.00	0.61	-0.13	-0.04	.44	.57	.61	905	979.3	122.0	51.9
44.25	0.61	-0.14	-0.04	.44	.57	.61	907	979.0	121.4	51.3
44.50	0.61	-0.14	-0.04	.43	.58	.62	902	978.7	120.7	50.7
40245.00	0.57	-0.15	-0.04	.39	-17.63	-17.67	875	978.1	119.5	49.6
45.50	0.63	-0.16	-0.04	.43	.58	.63	903	977.5	118.2	48.4
46.00	0.89	-0.17	-0.04	.68	.39	.44	1028	976.9	116.9	47.3
46.50	0.85	-0.17	-0.04	.64	.42	.47	1008	976.3	115.6	46.1
47.00	0.81	-0.18	-0.04	.59	.46	.51	985	975.6	114.3	45.0
47.50	0.84	-0.18	-0.04	.61	.45	.50	999	974.9	113.1	43.8
48.00	0.77	-0.18	-0.05	.54	.50	.55	971	974.2	111.8	42.6
48.50	0.73	-0.17	-0.05	.51	.52	.58	956	973.5	110.6	41.5
40248.75	0.77	-0.17	-0.05	.55	-17.49	-17.55	977	973.2	109.9	40.9
49.00	0.76	-0.17	-0.05	.55	.49	.55	979	972.8	109.3	40.3
49.25	0.75	-0.16	-0.05	.55	.49	.54	982	972.5	108.7	39.7
49.50	0.74	-0.15	-0.05	.55	.48	.54	987	972.1	108.1	39.2
49.75	0.71	-0.14	-0.05	.53	.49	.55	982	971.7	107.4	38.6
50.00	0.69	-0.13	-0.05	.51	.51	.56	972	971.4	106.8	38.0
50.25	0.69	-0.12	-0.05	.52	.50	.56	979	971.0	106.2	37.4
50.50	0.68	-0.11	-0.05	.52	.50	.55	981	970.6	105.6	36.8
50.75	0.65	-0.09	-0.05	.51	.51	.56	977	970.3	105.0	36.2
51.00	0.62	0.08	-0.05	.66	.39	.45	1046	969.9	104.3	35.7
51.25	0.61	0.07	-0.05	.63	.42	.48	1032	969.5	103.7	35.1
51.50	0.60	0.06	-0.05	.61	.43	.50	1022	969.1	103.1	34.5
51.75	0.60	0.05	-0.05	.59	.45	.51	1015	968.7	102.5	33.9
52.00	0.56	0.03	-0.05	.55	.47	.54	1000	968.4	101.9	33.3
52.25	0.55	0.02	-0.05	.52	.49	.56	989	968.0	101.3	32.7
52.50	0.59	0.01	-0.05	.54	.48	.54	998	967.6	100.7	32.2
52.75	0.60	0.00	-0.05	.55	.48	.55	1000	967.2	100.1	31.6
53.00	0.70	0.00	-0.05	.65	.40	.48	1043	966.8	99.4	31.0
53.25	0.71	0.00	-0.05	.65	.40	.47	1047	966.4	98.8	30.4
53.50	0.71	0.00	-0.05	.65	.39	.46	1050	966.0	98.2	29.8
53.75	0.67	0.00	-0.05	.62	.41	.49	1039	965.6	97.6	29.2
54.00	0.66	0.00	-0.05	.61	.42	.50	1034	965.2	97.0	28.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40254.25	0.67	0.00	-0.05	.62	-17.41	-17.49	1040	964.8	96.4	28.1
54.50	0.77	0.00	-0.05	.72	.35	.43	1076	964.4	95.8	27.5
54.75	1.21	0.00	-0.05	1.16	.15	.23	1180	964.0	95.2	26.9
55.00	2.12	0.00	-0.05	2.07	-16.90	.00	1296	963.6	94.6	26.3
40255.20	1.67	0.00	-0.05	1.62	-17.00	-17.11	1251	963.3	94.1	25.8
55.40	1.17	0.00	-0.05	1.11	.16	.27	1172	963.0	93.6	25.4
55.60	0.81	0.00	-0.05	.76	.33	.43	1090	962.7	93.1	24.9
55.80	0.72	0.00	-0.05	.67	.38	.49	1062	962.4	92.7	24.4
56.00	0.96	0.00	-0.05	.91	.25	.35	1131	962.0	92.2	24.0
56.20	1.15	0.00	-0.05	1.09	.17	.27	1169	961.7	91.7	23.5
56.40	1.20	0.00	-0.05	1.15	.14	.24	1180	961.4	91.2	23.0
56.60	0.96	0.00	-0.05	.91	.24	.34	1131	961.1	90.7	22.6
56.80	0.96	0.00	-0.05	.90	.25	.35	1129	960.8	90.2	22.1
57.00	1.10	0.00	-0.05	1.05	.18	.28	1162	960.4	89.8	21.6
57.20	1.20	0.00	-0.05	1.14	.14	.25	1180	960.1	89.3	21.2
57.40	1.14	0.00	-0.05	1.08	.17	.27	1169	959.8	88.8	20.7
57.60	0.74	0.00	-0.05	.69	.36	.46	1073	959.5	88.3	20.2
57.80	0.53	0.00	-0.05	.47	.52	.63	981	959.2	87.8	19.7
58.00	0.59	0.00	-0.05	.53	.47	.57	1012	958.8	87.4	19.3
58.20	1.02	0.00	-0.05	.96	.21	.32	1146	958.5	86.9	18.8
58.40	1.41	0.00	-0.05	1.36	.06	.18	1218	958.2	86.4	18.3
58.60	1.16	0.00	-0.05	1.11	.14	.26	1178	957.9	85.9	17.9
58.80	0.97	0.00	-0.05	.92	.23	.34	1139	957.6	85.5	17.4
59.00	0.91	0.00	-0.05	.85	.26	.37	1122	957.2	85.0	16.9
40259.25	0.94	0.00	-0.05	.89	-17.24	-17.35	1133	956.9	84.4	16.3
59.50	1.04	0.00	-0.05	.98	.19	.31	1153	956.5	83.8	15.8
59.75	1.07	0.00	-0.05	1.02	.17	.29	1162	956.1	83.2	15.2
60.00	1.10	0.00	-0.05	1.05	.16	.28	1168	955.7	82.6	14.6
60.25	1.10	0.00	-0.05	1.04	.16	.29	1167	955.3	82.0	14.0
60.50	1.10	0.00	-0.05	1.05	.16	.28	1169	954.9	81.4	13.4
60.75	1.08	0.00	-0.05	1.03	.16	.29	1166	954.5	80.8	12.8
61.00	1.08	0.00	-0.05	1.03	.16	.29	1166	954.1	80.2	12.2
61.25	1.11	0.00	-0.05	1.06	.15	.27	1172	953.7	79.6	11.7
61.50	1.09	0.00	-0.05	1.04	.16	.28	1168	953.3	79.0	11.1
61.75	1.07	0.00	-0.05	1.02	.16	.29	1165	952.9	78.4	10.5
62.00	1.03	0.00	-0.05	.99	.17	.30	1159	952.6	77.8	9.9
62.25	0.99	0.00	-0.05	.94	.19	.32	1149	952.2	77.2	9.3
62.50	1.05	0.00	-0.05	1.00	.17	.30	1162	951.8	76.6	8.7
40262.80	1.17	0.00	-0.05	1.13	-17.11	-17.25	1187	951.3	75.9	8.0
63.00	1.42	0.00	-0.05	1.37	.02	.17	1224	951.0	75.4	7.6
63.20	2.20	0.00	-0.05	2.15	-16.82	-16.97	1313	950.7	75.0	7.1
63.40	1.90	0.00	-0.05	1.85	.88	-17.04	1286	950.5	74.5	6.6
63.60	1.47	0.00	-0.05	1.42	-17.00	.15	1236	950.2	74.0	6.2
63.80	1.63	0.00	-0.05	1.59	-16.94	.10	1260	949.9	73.5	5.7
64.00	1.69	0.00	-0.05	1.65	.92	.09	1269	949.6	73.1	5.2
64.20	1.32	0.00	-0.05	1.27	-17.04	.20	1217	949.3	72.6	4.7
64.40	1.10	0.00	-0.04	1.06	.12	.28	1177	949.0	72.1	4.3
64.60	1.02	0.00	-0.04	.98	.16	.30	1160	948.7	71.6	3.8
64.80	0.99	0.00	-0.04	.94	.18	.32	1152	948.5	71.2	3.3
40265.00	0.92	0.00	-0.04	.88	-17.20	-17.35	1140	948.2	70.7	2.9
65.25	1.03	0.00	-0.04	.98	.15	.31	1163	947.8	70.1	2.3
65.50	1.04	0.00	-0.04	1.00	.14	.30	1166	947.5	69.5	1.7
65.75	1.09	0.00	-0.04	1.05	.12	.28	1175	947.1	68.9	1.1
66.00	1.10	0.00	-0.04	1.06	.12	.27	1177	946.8	68.3	0.5
66.25	1.09	0.00	-0.04	1.05	.12	.28	1176	946.5	67.7	-0.1
66.50	1.08	0.00	-0.04	1.04	.12	.28	1174	946.2	67.1	-0.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40266.75	0.99	0.00	-0.04	.96	-17.16	-17.31	1158	945.8	66.5	-1.2
67.00	0.97	0.00	-0.04	.93	.17	.33	1152	945.5	65.9	-1.8
67.25	1.03	0.00	-0.04	.99	.13	.30	1167	945.2	65.3	-2.4
67.50	1.05	0.00	-0.04	1.01	.12	.29	1172	944.9	64.7	-3.0
67.75	1.06	0.00	-0.03	1.02	.12	.29	1173	944.6	64.1	-3.6
68.00	1.06	0.00	-0.03	1.05	.10	.28	1179	944.3	63.5	-4.2
68.25	1.13	0.00	-0.03	1.09	.09	.26	1186	944.1	62.9	-4.8
68.50	1.10	0.00	-0.03	1.07	.09	.27	1182	943.8	62.3	-5.4
68.75	1.11	0.00	-0.03	1.08	.09	.26	1183	943.5	61.7	-6.0
69.00	1.11	0.00	-0.03	1.08	.09	.26	1182	943.2	61.1	-6.5
69.25	1.12	0.00	-0.03	1.09	.09	.25	1183	943.0	60.5	-7.1
69.50	1.11	0.00	-0.03	1.08	.09	.26	1181	942.7	59.9	-7.7
69.75	1.12	0.00	-0.03	1.09	.08	.25	1183	942.5	59.3	-8.3
70.00	1.12	0.00	-0.03	1.10	.08	.25	1185	942.3	58.7	-8.9
70.25	1.13	0.00	-0.03	1.10	.08	.25	1185	942.1	58.1	-9.5
70.50	1.14	0.00	-0.02	1.12	.07	.24	1188	941.8	57.5	-10.1
70.75	1.20	0.00	-0.02	1.18	.04	.21	1198	941.6	56.9	-10.7
71.00	1.22	0.00	-0.02	1.20	.03	.21	1202	941.4	56.3	-11.3
71.25	1.29	0.00	-0.02	1.27	.01	.19	1214	941.2	55.7	-11.8
71.50	1.36	0.00	-0.02	1.34	-16.98	.16	1225	941.1	55.1	-12.4
71.75	1.43	0.00	-0.02	1.41	.95	.14	1236	940.9	54.5	-13.0
72.00	1.63	0.00	-0.02	1.61	.89	.08	1260	940.7	53.9	-13.6
72.25	1.79	0.00	-0.02	1.77	.85	.04	1278	940.6	53.3	-14.2
72.50	1.92	0.00	-0.02	1.91	.81	.01	1293	940.4	52.7	-14.8
72.75	1.83	0.00	-0.01	1.82	.83	.03	1285	940.3	52.1	-15.4
73.00	1.82	0.00	-0.01	1.80	.83	.03	1284	940.2	51.5	-16.0
73.25	1.93	0.00	-0.01	1.92	.80	.00	1296	940.1	50.9	-16.6
73.50	1.98	0.00	-0.01	1.96	.79	-16.99	1301	940.0	50.3	-17.2
73.75	1.83	0.00	-0.01	1.82	.82	-17.03	1286	939.9	49.6	-17.7
74.00	1.71	0.00	-0.01	1.71	.86	.05	1272	939.8	49.0	-18.3
74.25	1.87	0.00	-0.01	1.86	.82	.02	1287	939.8	48.4	-18.9
74.50	2.03	0.00	-0.01	2.03	.78	-16.98	1304	939.7	47.8	-19.5
74.75	2.06	0.00	0.00	2.05	.77	.97	1309	939.7	47.2	-20.1
75.00	2.08	0.00	0.00	2.08	.76	.97	1313	939.7	46.6	-20.7
75.25	2.23	0.01	0.00	2.23	.73	.93	1326	939.7	45.9	-21.3
75.50	2.44	0.02	0.00	2.46	.68	.89	1348	939.7	45.3	-21.9
75.75	2.55	0.03	0.00	2.58	.65	.87	1358	939.7	44.7	-22.5
76.00	2.35	0.04	0.00	2.39	.69	.90	1343	939.8	44.1	-23.1
76.25	2.20	0.05	0.00	2.25	.71	.92	1331	939.8	43.5	-23.6
76.50	2.14	0.06	0.00	2.20	.72	.93	1328	939.9	42.8	-24.2
76.75	2.15	0.07	0.00	2.22	.71	.93	1330	940.0	42.2	-24.8
77.00	2.15	0.07	0.01	2.23	.71	.93	1329	940.1	41.6	-25.4
77.25	2.14	0.08	0.01	2.23	.71	.93	1330	940.2	40.9	-26.0
77.50	2.08	0.09	0.01	2.18	.72	.93	1327	940.3	40.3	-26.6
77.75	2.11	0.10	0.01	2.22	.72	.93	1328	940.5	39.7	-27.2
78.00	2.20	0.11	0.01	2.32	.70	.91	1336	940.6	39.0	-27.8
78.25	2.32	0.11	0.01	2.44	.67	.88	1347	940.8	38.4	-28.4
78.50	2.32	0.12	0.01	2.45	.66	.88	1351	941.0	37.8	-28.9
78.75	2.37	0.13	0.01	2.51	.66	.87	1354	941.2	37.1	-29.5
79.00	2.39	0.14	0.01	2.54	.66	.87	1354	941.4	36.5	-30.1
79.25	2.51	0.15	0.02	2.67	.64	.84	1363	941.6	35.8	-30.7
79.50	2.61	0.15	0.02	2.78	.62	.83	1372	941.9	35.2	-31.3
79.75	2.85	0.16	0.02	3.03	.58	.78	1390	942.1	34.5	-31.9
80.00	2.53	0.17	0.02	2.72	.62	.83	1370	942.4	33.9	-32.5
80.25	2.14	0.18	0.02	2.34	.69	.90	1337	942.7	33.2	-33.1
80.50	2.08	0.18	0.02	2.28	.71	.91	1330	943.0	32.6	-33.7
80.75	2.03	0.19	0.02	2.25	.72	.92	1327	943.3	31.9	-34.2
81.00	2.06	0.20	0.03	2.29	.71	.91	1329	943.7	31.2	-34.8
81.25	1.87	0.21	0.03	2.11	.75	.95	1311	944.0	30.6	-35.4
81.50	1.80	0.21	0.03	2.04	.78	.97	1301	944.4	29.9	-36.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40281.75	1.73	0.22	0.03	1.98	-16.80	-16.98	1293	944.8	29.2	-36.6
82.00	1.65	0.23	0.03	1.91	.81	-17.00	1288	945.2	28.6	-37.2
82.25	1.65	0.24	0.03	1.92	.81	.00	1289	945.6	27.9	-37.8
82.50	1.61	0.24	0.03	1.89	.82	.01	1283	946.0	27.2	-38.4
82.75	1.47	0.25	0.03	1.76	.86	.04	1266	946.5	26.5	-39.0
83.00	1.27	0.26	0.04	1.57	.92	.09	1242	946.9	25.8	-39.5
83.25	1.16	0.26	0.04	1.46	.95	.12	1227	947.4	25.1	-40.1
83.50	1.04	0.27	0.04	1.35	.99	.15	1210	947.8	24.5	-40.7
83.75	0.83	0.28	0.04	1.15	-17.07	.22	1178	948.3	23.8	-41.3
84.00	0.64	0.29	0.04	.96	.15	.30	1142	948.8	23.0	-41.9
84.25	0.82	0.29	0.04	1.16	.07	.22	1178	949.3	22.3	-42.5
84.50	0.97	0.30	0.04	1.31	.02	.16	1201	949.8	21.6	-43.1
84.75	0.99	0.31	0.04	1.34	.01	.15	1205	950.3	20.9	-43.7
85.00	1.13	0.32	0.04	1.49	-16.96	.11	1226	950.8	20.2	-44.2
85.25	1.21	0.33	0.05	1.59	.93	.08	1239	951.3	19.5	-44.8
85.50	0.76	0.34	0.05	1.14	-17.08	.23	1173	951.8	18.7	-45.4
40315.25	0.38	0.40	0.06	.84	-17.35	-17.41	1028	1017.1	178.3	-67.8
15.50	0.36	0.40	0.06	.82	.35	.42	1022	1017.5	177.3	-67.4
15.75	0.33	0.39	0.06	.78	.38	.44	1008	1018.0	176.4	-67.0
16.00	0.32	0.39	0.06	.77	.38	.44	1004	1018.4	175.5	-66.6
16.25	0.34	0.38	0.06	.78	.38	.44	1008	1018.8	174.6	-66.2
16.50	0.34	0.38	0.06	.78	.38	.44	1008	1019.1	173.7	-65.8
16.75	0.32	0.37	0.06	.74	.40	.46	994	1019.5	172.8	-65.4
17.00	0.28	0.37	0.06	.71	.42	.47	983	1019.8	171.9	-65.0
17.25	0.26	0.36	0.05	.68	.44	.49	968	1020.2	171.1	-64.6
17.50	0.27	0.35	0.05	.68	.44	.49	969	1020.5	170.2	-64.2
17.75	0.26	0.35	0.05	.66	.45	.50	962	1020.7	169.4	-63.8
18.00	0.24	0.34	0.05	.63	.47	.52	946	1021.0	168.6	-63.4
18.25	0.34	0.34	0.05	.73	.41	.47	984	1021.3	167.8	-63.0
18.50	0.60	0.33	0.05	.99	.28	.33	1071	1021.5	166.9	-62.6
18.75	0.39	0.22	0.05	.66	.45	.50	958	1021.7	166.1	-62.2
19.00	0.37	0.32	0.05	.74	.40	.45	991	1021.9	165.4	-61.7
19.25	0.14	0.31	0.05	.50	.57	.62	880	1022.1	164.6	-61.3
19.50	0.20	0.31	0.05	.55	.53	.58	910	1022.3	163.8	-60.9
19.75	0.24	0.30	0.04	.59	.49	.54	932	1022.4	163.0	-60.5
20.00	0.27	0.30	0.04	.61	.48	.53	941	1022.6	162.3	-60.1
20.25	0.30	0.29	0.04	.63	.47	.52	949	1022.7	161.5	-59.7
20.50	0.34	0.28	0.04	.66	.45	.50	961	1022.8	160.8	-59.2
20.75	0.40	0.27	0.04	.72	.41	.46	985	1022.9	160.0	-58.8
21.00	0.50	0.27	0.04	.81	.36	.41	1018	1022.9	159.3	-58.4
21.25	0.40	0.26	0.04	.70	.42	.47	977	1023.0	158.5	-58.0
21.50	0.36	0.25	0.04	.65	.45	.50	959	1023.0	157.8	-57.5
21.75	0.34	0.25	0.04	.62	.47	.52	944	1023.0	157.1	-57.1
22.00	0.34	0.24	0.03	.61	.48	.53	939	1023.0	156.4	-56.7
22.25	0.39	0.23	0.03	.66	.45	.50	961	1023.0	155.7	-56.3
22.50	0.49	0.23	0.03	.76	.39	.44	1000	1023.0	154.9	-55.8
22.75	0.48	0.22	0.03	.74	.40	.45	993	1022.9	154.2	-55.4
23.00	0.38	0.21	0.03	.62	.48	.52	944	1022.9	153.5	-55.0
23.25	0.35	0.21	0.03	.59	.50	.54	932	1022.8	152.8	-54.6
23.50	0.34	0.20	0.03	.57	.51	.56	923	1022.7	152.2	-54.1
23.75	0.31	0.19	0.03	.53	.54	.59	901	1022.6	151.5	-53.7
24.00	0.41	0.19	0.03	.62	.48	.53	939	1022.5	150.8	-53.3
24.25	0.59	0.17	0.02	.79	.38	.43	1004	1022.4	150.1	-52.8
24.50	0.63	0.17	0.02	.82	.36	.41	1017	1022.2	149.4	-52.4
24.75	0.51	0.17	0.02	.70	.43	.48	972	1022.0	148.8	-52.0
25.00	0.60	0.16	0.02	.78	.39	.44	1000	1021.9	148.1	-51.5
25.25	0.64	0.15	0.02	.81	.37	.43	1008	1021.6	147.4	-51.1
25.50	0.52	0.15	0.02	.69	.44	.49	966	1021.4	146.8	-50.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40325.75	0.48	0.14	0.02	.64	-17.47	-17.52	947	1021.2	146.1	-50.2
26.00	0.51	0.13	0.02	.66	.46	.51	953	1020.9	145.4	-49.8
26.25	0.63	0.12	0.02	.77	.40	.45	995	1020.7	144.8	-49.4
26.50	0.76	0.12	0.02	.89	.33	.39	1036	1020.4	144.1	-48.9
26.75	0.70	0.11	0.01	.82	.37	.43	1013	1020.1	143.5	-48.5
27.00	0.67	0.11	0.01	.79	.38	.44	1005	1019.8	142.8	-48.1
27.25	0.64	0.09	0.01	.75	.40	.46	990	1019.5	142.2	-47.6
27.50	0.63	0.09	0.01	.73	.42	.48	981	1019.1	141.5	-47.2
27.75	0.64	0.08	0.01	.73	.42	.48	980	1018.8	140.9	-46.7
28.00	0.75	0.07	0.01	.83	.37	.43	1016	1018.4	140.2	-46.3
28.25	0.79	0.06	0.01	.86	.35	.41	1026	1018.1	139.6	-45.9
28.50	0.77	0.06	0.01	.84	.36	.42	1021	1017.7	139.0	-45.4
28.75	0.69	0.05	0.01	.75	.41	.47	990	1017.3	138.3	-45.0
29.00	0.71	0.04	0.01	.76	.40	.46	995	1016.9	137.7	-44.5
29.25	0.80	0.03	0.00	.84	.36	.32	1023	1016.5	137.1	-44.1
29.50	0.76	0.03	0.00	.80	.37	.34	1011	1016.1	136.4	-43.7
29.75	0.58	0.02	0.00	.60	.49	.46	936	1015.7	135.8	-43.2
30.00	0.56	0.02	0.00	.57	.51	.48	924	1015.2	135.2	-42.8
30.25	0.56	0.01	0.00	.56	.52	.49	920	1014.8	134.6	-42.3
30.50	0.60	0.00	0.00	.60	.48	.46	943	1014.3	134.0	-41.9
30.75	0.61	0.00	0.00	.61	.47	.45	950	1013.9	133.3	-41.5
31.00	0.62	-0.01	0.00	.61	.48	.45	949	1013.4	132.7	-41.0
31.25	0.65	-0.02	0.00	.63	.46	.44	957	1012.9	132.1	-40.6
31.50	0.67	-0.02	-0.01	.64	.46	.43	963	1012.5	131.5	-40.1
31.75	0.68	-0.03	-0.01	.64	.45	.43	965	1012.0	130.9	-39.7
32.00	0.70	-0.04	-0.01	.66	.44	.42	971	1011.5	130.3	-39.3
32.25	0.72	-0.04	-0.01	.67	.44	.42	973	1011.0	129.6	-38.8
32.50	0.70	-0.05	-0.01	.63	.46	.44	960	1010.5	129.0	-38.4
32.75	0.70	-0.05	-0.01	.64	.45	.43	968	1009.9	128.4	-37.9
33.00	0.72	-0.06	-0.01	.64	.45	.43	968	1009.4	127.8	-37.5
33.25	0.73	-0.07	-0.01	.65	.45	.43	969	1008.9	127.2	-37.1
33.50	0.76	-0.07	-0.01	.68	.43	.42	979	1008.4	126.6	-36.6
33.75	0.83	-0.08	-0.01	.74	.40	.38	1002	1007.8	126.0	-36.2
34.00	0.81	-0.08	-0.02	.71	.41	.40	996	1007.3	125.4	-35.7
34.25	0.80	-0.09	-0.02	.69	.42	.41	991	1006.7	124.8	-35.3
34.50	0.73	-0.09	-0.02	.62	.46	.45	962	1006.2	124.2	-34.9
34.75	0.74	-0.10	-0.02	.62	.46	.45	964	1005.6	123.6	-34.4
35.00	0.75	-0.11	-0.02	.62	.46	.45	964	1005.1	123.0	-34.0
35.25	0.80	-0.11	-0.02	.68	.42	.42	988	1004.5	122.4	-33.5
35.50	0.76	-0.11	-0.02	.63	.46	.45	967	1004.0	121.8	-33.1
35.75	0.75	-0.12	-0.02	.61	.47	.46	962	1003.4	121.2	-32.6
36.00	0.82	-0.12	-0.02	.68	.42	.41	993	1002.8	120.6	-32.2
36.25	0.86	-0.12	-0.02	.71	.41	.40	1003	1002.3	120.0	-31.8
36.50	0.81	-0.13	-0.02	.66	.44	.43	983	1001.7	119.4	-31.3
36.75	0.77	-0.13	-0.02	.62	.46	.46	970	1001.1	118.8	-30.9
37.00	0.77	-0.13	-0.03	.61	.47	.46	967	1000.5	118.2	-30.4
37.25	0.77	-0.13	-0.03	.61	.46	.46	968	999.9	117.6	-30.0
37.50	0.77	-0.14	-0.03	.61	.46	.46	971	999.4	117.0	-29.5
37.75	0.73	-0.14	-0.03	.56	.50	.50	949	998.8	116.4	-29.1
38.00	0.74	-0.14	-0.03	.58	.49	.49	956	998.2	115.8	-28.6
38.25	0.78	-0.14	-0.03	.61	.47	.47	968	997.6	115.2	-28.2
38.50	0.80	-0.14	-0.03	.63	.45	.46	978	997.0	114.6	-27.8
38.75	0.82	-0.14	-0.03	.65	.44	.44	990	996.4	114.0	-27.3
39.00	0.88	-0.13	-0.03	.71	.40	.40	1016	995.9	113.4	-26.9
39.25	1.01	-0.13	-0.03	.84	.33	.34	1058	995.3	112.8	-26.4
39.50	1.07	-0.13	-0.03	.91	.30	.31	1075	994.7	112.2	-26.0
39.75	1.05	-0.12	-0.03	.89	.31	.32	1070	994.1	111.7	-25.5
40.00	1.00	-0.11	-0.03	.85	.32	.34	1062	993.5	111.1	-25.1
40.25	0.85	-0.11	-0.04	.70	.40	.41	1016	992.9	110.5	-24.6
40.50	0.82	-0.09	-0.04	.69	.40	.42	1015	992.3	109.9	-24.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40340.75	0.81	-0.08	-0.04	.70	-17.39	-17.41	1021	991.7	109.3	-23.7
41.00	0.78	-0.06	-0.04	.68	.41	.43	1012	991.2	108.7	-23.3
41.25	0.80	-0.04	-0.04	.72	.39	.41	1025	990.6	108.1	-22.9
41.50	0.84	-0.01	-0.04	.79	.35	.37	1050	990.0	107.5	-22.4
41.75	0.75	0.00	-0.04	.71	.39	.42	1024	989.4	106.9	-22.0
42.00	0.71	0.00	-0.04	.67	.42	.44	1010	988.8	106.3	-21.5
42.25	0.65	0.00	-0.04	.61	.45	.46	988	988.3	105.8	-21.1
42.50	0.62	0.00	-0.04	.58	.47	.50	978	987.7	105.2	-20.6
42.75	0.61	0.00	-0.04	.56	.48	.51	973	987.1	104.6	-20.2
43.00	0.58	0.00	-0.04	.54	.50	.53	965	986.5	104.0	-19.7
43.25	0.58	0.00	-0.04	.54	.50	.53	965	986.0	103.4	-19.3
43.50	0.66	0.00	-0.04	.61	.45	.48	998	985.4	102.8	-18.9
43.75	0.80	0.00	-0.04	.76	.35	.39	1053	984.8	102.2	-18.4
44.00	0.95	0.00	-0.04	.90	.28	.32	1093	984.3	101.6	-18.0
44.25	0.70	0.00	-0.05	.65	.42	.46	1014	983.7	101.0	-17.5
44.50	0.65	0.00	-0.05	.60	.45	.49	996	983.1	100.5	-17.1
44.75	0.64	0.00	-0.05	.59	.46	.50	993	982.6	99.9	-16.6
45.00	0.64	0.00	-0.05	.59	.46	.50	996	982.0	99.3	-16.2
45.25	0.63	0.00	-0.05	.58	.46	.51	993	981.5	98.7	-15.7
45.50	0.65	0.00	-0.05	.61	.44	.48	1009	980.9	98.1	-15.3
45.75	0.64	0.00	-0.05	.59	.45	.50	1002	980.4	97.5	-14.9
46.00	0.66	0.00	-0.05	.61	.44	.49	1011	979.9	96.9	-14.4
46.25	0.73	0.00	-0.05	.68	.39	.44	1039	979.3	96.3	-14.0
46.50	0.73	0.00	-0.05	.68	.39	.44	1041	978.8	95.7	-13.5
46.75	0.72	0.00	-0.05	.67	.40	.45	1039	978.3	95.2	-13.1
47.00	0.81	0.00	-0.05	.76	.34	.40	1070	977.7	94.6	-12.6
47.25	0.82	0.00	-0.05	.77	.33	.39	1074	977.2	94.0	-12.2
47.50	0.82	0.00	-0.05	.77	.33	.39	1076	976.7	93.4	-11.8
47.75	0.81	0.00	-0.05	.76	.34	.40	1075	976.2	92.8	-11.3
48.00	0.85	0.00	-0.05	.79	.32	.38	1085	975.7	92.2	-10.9
48.25	0.82	0.00	-0.05	.77	.33	.39	1080	975.2	91.6	-10.4
48.50	0.79	0.00	-0.05	.73	.35	.42	1069	974.7	91.0	-10.0
48.75	0.80	0.00	-0.05	.75	.34	.40	1077	974.2	90.4	-9.5
49.00	0.80	0.00	-0.05	.75	.33	.40	1080	973.8	89.8	-9.1
49.25	0.84	0.00	-0.05	.78	.32	.38	1090	973.3	89.2	-8.7
49.50	0.87	0.00	-0.05	.81	.30	.37	1099	972.8	88.7	-8.2
49.75	0.88	0.00	-0.05	.82	.29	.36	1102	972.4	88.1	-7.8
50.00	0.92	0.00	-0.05	.86	.27	.34	1113	971.9	87.5	-7.3
50.25	0.95	0.00	-0.05	.89	.26	.33	1121	971.5	86.9	-6.9
50.50	1.02	0.00	-0.05	.97	.22	.30	1140	971.0	86.3	-6.5
50.75	1.03	0.00	-0.05	.98	.21	.29	1143	970.6	85.7	-6.0
51.00	1.08	0.00	-0.05	1.03	.19	.27	1155	970.2	85.1	-5.6
51.25	1.21	0.00	-0.05	1.15	.14	.22	1180	969.8	84.5	-5.1
51.50	1.14	0.00	-0.05	1.09	.16	.25	1168	969.3	83.9	-4.7
51.75	0.99	0.00	-0.05	.93	.23	.32	1137	968.9	83.3	-4.2
52.00	1.01	0.00	-0.05	.96	.22	.30	1144	968.6	82.7	-3.8
52.25	1.03	0.00	-0.05	.97	.21	.30	1148	968.2	82.1	-3.4
52.50	1.04	0.00	-0.05	.98	.21	.29	1151	967.8	81.5	-2.9
52.75	1.04	0.00	-0.05	.99	.20	.29	1154	967.4	80.9	-2.5
40353.00	1.09	0.00	-0.05	1.04	-17.18	-17.27	1165	967.1	80.3	-2.0
53.20	1.10	0.00	-0.05	1.05	.17	.26	1168	966.8	79.8	-1.7
53.40	1.16	0.00	-0.05	1.10	.15	.24	1178	966.5	79.3	-1.3
53.60	1.17	0.00	-0.05	1.11	.15	.24	1180	966.3	78.9	-1.0
53.80	1.20	0.00	-0.05	1.15	.13	.22	1188	966.0	78.4	-0.6
54.00	1.36	0.00	-0.05	1.31	.07	.17	1215	965.8	77.9	-0.3
54.20	1.71	0.00	-0.05	1.66	-16.95	.07	1264	965.5	77.4	0.1
54.40	1.88	0.00	-0.05	1.83	.90	.02	1287	965.3	76.9	0.4
54.60	1.77	0.00	-0.05	1.72	.93	.05	1276	965.0	76.5	0.8
54.80	1.60	0.00	-0.05	1.54	.98	.10	1256	964.8	76.0	1.1

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40355.00	1.62	0.00	-0.05	1.57	-16.97	-17.09	1261	964.6	75.5	1.5
55.20	1.76	0.00	-0.05	1.71	.93	.05	1279	964.4	75.0	1.8
55.40	1.63	0.00	-0.05	1.58	.96	.08	1264	964.2	74.5	2.2
55.60	1.41	0.00	-0.05	1.36	-17.03	.15	1234	964.0	74.0	2.6
55.80	1.44	0.00	-0.05	1.39	.02	.14	1238	963.8	73.5	2.9
56.00	1.95	0.00	-0.05	1.89	-16.88	.01	1299	963.7	73.1	3.3
56.20	2.63	0.00	-0.05	2.58	.73	-16.86	1366	963.5	72.6	3.6
56.40	2.57	0.00	-0.05	2.52	.74	.87	1363	963.4	72.1	4.0
56.60	2.12	0.00	-0.05	2.07	.82	.95	1327	963.2	71.6	4.3
56.80	1.97	0.00	-0.05	1.92	.84	.98	1317	963.1	71.1	4.7
57.00	1.81	0.00	-0.05	1.76	.88	-17.02	1301	962.9	70.6	5.0
57.20	1.65	0.00	-0.05	1.60	.93	.06	1281	962.8	70.1	5.4
57.40	1.44	0.00	-0.05	1.39	-17.00	.13	1254	962.7	69.6	5.7
57.60	1.36	0.00	-0.05	1.34	.02	.15	1245	962.6	69.1	6.1
57.80	0.99	0.00	-0.05	.94	.18	.31	1176	962.5	68.7	6.4
58.00	1.16	0.00	-0.05	1.12	.11	.24	1204	962.4	68.2	6.8
58.20	1.27	0.00	-0.05	1.23	.07	.20	1223	962.3	67.7	7.1
58.40	1.37	0.00	-0.05	1.32	.04	.17	1238	962.2	67.2	7.5
58.60	1.25	0.00	-0.05	1.20	.08	.21	1220	962.2	66.7	7.8
58.80	1.10	0.00	-0.05	1.05	.14	.27	1194	962.1	66.2	8.2
59.00	1.00	0.00	-0.05	.96	.18	.31	1177	962.0	65.7	8.5
59.20	1.20	0.00	-0.05	1.16	.09	.22	1216	962.0	65.2	8.9
59.40	1.35	0.00	-0.05	1.31	.04	.17	1241	962.0	64.7	9.2
59.60	1.29	0.00	-0.05	1.25	.06	.19	1232	961.9	64.2	9.6
59.80	1.32	0.00	-0.05	1.27	.05	.18	1236	961.9	63.7	10.0
60.00	1.32	0.00	-0.04	1.27	.05	.18	1239	961.9	63.2	10.3
60.20	1.16	0.00	-0.04	1.12	.10	.23	1217	961.9	62.7	10.7
60.40	1.07	0.00	-0.04	1.02	.15	.28	1196	961.9	62.2	11.0
60.60	1.20	0.00	-0.04	1.16	.10	.22	1219	961.9	61.7	11.4
60.80	1.23	0.00	-0.04	1.18	.08	.21	1225	962.0	61.2	11.7
61.00	1.28	0.00	-0.04	1.24	.06	.19	1234	962.0	60.7	12.1
40361.25	1.28	0.00	-0.04	1.24	-17.07	-17.20	1233	962.1	60.0	12.5
61.50	1.25	-0.01	-0.04	1.20	.08	.21	1227	962.1	59.4	12.9
61.75	1.22	-0.02	-0.04	1.15	.11	.23	1219	962.2	58.8	13.4
62.00	1.21	-0.03	-0.04	1.14	.11	.23	1218	962.3	58.1	13.8
62.25	1.30	-0.03	-0.04	1.22	.08	.20	1233	962.4	57.5	14.3
62.50	1.22	-0.03	-0.04	1.15	.10	.23	1224	962.5	56.9	14.7
62.75	1.18	-0.04	-0.04	1.10	.12	.25	1218	962.7	56.2	15.1
63.00	1.15	-0.04	-0.04	1.07	.13	.26	1213	962.8	55.6	15.6
63.25	1.10	-0.04	-0.04	1.02	.15	.28	1204	962.9	54.9	16.0
63.50	1.13	-0.04	-0.04	1.05	.14	.27	1211	963.1	54.3	16.5
63.75	1.12	-0.04	-0.03	1.05	.13	.26	1215	963.3	53.6	16.9
64.00	1.13	-0.03	-0.03	1.06	.13	.26	1217	963.4	53.0	17.3
64.25	1.10	-0.03	-0.03	1.03	.15	.27	1211	963.6	52.3	17.8
64.50	1.06	-0.03	-0.03	1.00	.16	.29	1208	963.8	51.7	18.2
64.75	1.05	-0.03	-0.03	.99	.16	.29	1208	964.0	51.0	18.7
65.00	1.01	-0.02	-0.03	.96	.18	.30	1203	964.2	50.3	19.1
65.25	1.00	-0.02	-0.03	.95	.18	.31	1200	964.4	49.7	19.5
65.50	0.97	-0.01	-0.03	.93	.19	.32	1197	964.6	49.0	20.0
65.75	0.94	-0.01	-0.03	.90	.21	.33	1192	964.8	48.3	20.4
66.00	0.93	0.00	-0.03	.90	.21	.33	1192	965.0	47.7	20.9
66.25	0.92	0.00	-0.03	.89	.21	.34	1192	965.3	47.0	21.3
66.50	0.90	0.01	-0.03	.88	.23	.50	1188	965.5	46.3	21.7
66.75	0.88	0.01	-0.03	.86	.24	.51	1181	965.7	45.6	22.2
67.00	0.87	0.02	-0.03	.86	.24	.51	1182	966.0	44.9	22.6
67.25	0.85	0.02	-0.02	.85	.25	.52	1181	966.2	44.3	23.0
67.50	0.85	0.03	-0.02	.85	.25	.52	1180	966.5	43.6	23.5
67.75	0.84	0.03	-0.02	.85	.26	.52	1180	966.8	42.9	23.9
68.00	0.81	0.04	-0.02	.83	.27	.53	1175	967.0	42.2	24.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40368.25	0.79	0.05	-0.02	.82	-17.28	-17.53	1173	967.3	41.5	24.8
68.50	0.77	0.05	-0.02	.80	.29	.54	1168	967.6	40.8	25.2
68.75	0.73	0.06	-0.02	.77	.31	.56	1162	967.9	40.1	25.7
69.00	0.70	0.07	-0.02	.75	.32	.57	1158	968.2	39.4	26.1
69.25	0.68	0.07	-0.02	.73	.33	.59	1154	968.5	38.6	26.6
69.50	0.67	0.08	-0.02	.74	.33	.58	1158	968.8	37.9	27.0
69.75	0.65	0.09	-0.02	.72	.34	.60	1154	969.1	37.2	27.4
70.00	0.63	0.09	-0.02	.71	.35	.60	1149	969.4	36.5	27.9
70.25	0.61	0.10	-0.01	.70	.37	.60	1144	969.7	35.7	28.3
70.50	0.61	0.11	-0.01	.70	.37	.60	1143	970.1	35.0	28.8
70.75	0.58	0.11	-0.01	.68	.38	.62	1138	970.4	34.3	29.2
71.00	0.57	0.12	-0.01	.68	.39	.62	1138	970.7	33.5	29.6
71.25	0.56	0.13	-0.01	.67	.40	.62	1135	971.0	32.8	30.1
71.50	0.58	0.14	-0.01	.70	.38	.61	1143	971.4	32.0	30.5
71.75	0.63	0.14	-0.01	.76	.34	.57	1159	971.7	31.2	31.0
72.00	0.60	0.15	-0.01	.74	.36	.58	1154	972.1	30.5	31.4
72.25	0.48	0.16	-0.01	.63	.43	.65	1123	972.4	29.7	31.8
72.50	0.42	0.16	-0.01	.58	.47	.69	1107	972.8	28.9	32.3
72.75	0.41	0.17	-0.01	.57	.48	.69	1103	973.1	28.1	32.7
73.00	0.34	0.18	-0.01	.51	.53	.74	1081	973.5	27.3	33.2
73.25	0.33	0.18	0.00	.51	.54	.74	1081	973.9	26.5	33.6
73.50	0.30	0.19	0.00	.49	.56	.75	1073	974.3	25.7	34.0
73.75	0.31	0.19	0.00	.50	.55	.74	1078	974.6	24.9	34.5
74.00	0.32	0.20	0.00	.52	.54	.72	1087	975.0	24.1	34.9
74.25	0.31	0.21	0.00	.52	.54	.72	1087	975.4	23.2	35.3
74.50	0.33	0.21	0.00	.54	.52	.71	1095	975.8	22.4	35.8
74.75	0.33	0.22	0.00	.55	.52	.70	1099	976.2	21.5	36.2
75.00	0.34	0.23	0.00	.57	.50	.69	1107	976.6	20.7	36.6
75.25	0.36	0.23	0.00	.59	.49	.67	1115	977.0	19.8	37.1
75.50	0.36	0.24	0.00	.60	.48	.66	1119	977.4	18.9	37.5
75.75	0.36	0.24	0.01	.61	.48	.66	1123	977.8	18.0	38.0
76.00	0.38	0.25	0.01	.64	.46	.64	1132	978.3	17.1	38.4
76.25	0.39	0.26	0.01	.66	.44	.63	1138	978.7	16.2	38.8
76.50	0.40	0.26	0.01	.67	.44	.63	1142	979.1	15.3	39.2
76.75	0.41	0.27	0.01	.68	.43	.62	1145	979.5	14.3	39.7
77.00	0.43	0.27	0.01	.72	.41	.60	1157	980.0	13.4	40.1
77.25	0.44	0.28	0.01	.73	.40	.59	1160	980.4	12.4	40.5
77.50	0.48	0.29	0.01	.78	.37	.57	1174	980.9	11.4	41.0
77.75	0.50	0.29	0.01	.81	.36	.56	1181	981.3	10.4	41.4
78.00	0.54	0.30	0.01	.85	.34	.53	1191	981.8	9.4	41.8
78.25	0.57	0.30	0.01	.89	.32	.51	1200	982.2	8.4	42.2
78.50	0.59	0.31	0.01	.92	.31	.50	1206	982.7	7.3	42.7
78.75	0.63	0.32	0.01	.96	.29	.48	1215	983.2	6.2	43.1
79.00	0.65	0.32	0.02	.99	.27	.47	1222	983.6	5.2	43.5
79.25	0.66	0.33	0.02	1.03	.25	.46	1231	984.1	4.0	43.9
79.50	0.70	0.34	0.02	1.06	.24	.44	1238	984.6	2.9	44.3
79.75	0.71	0.34	0.02	1.07	.23	.44	1242	985.0	1.8	44.7
80.00	0.74	0.35	0.02	1.11	.22	.42	1249	985.5	0.6	45.1
80.25	0.77	0.35	0.02	1.14	.21	.41	1254	986.0	359.4	45.5
80.50	0.79	0.36	0.02	1.17	.19	.40	1263	986.5	358.1	45.9
80.75	0.78	0.36	0.02	1.16	.19	.40	1263	987.0	356.9	46.4
81.00	0.75	0.37	0.02	1.14	.20	.41	1262	987.5	355.6	46.7
81.25	0.73	0.37	0.02	1.13	.20	.41	1261	988.0	354.3	47.1
81.50	0.82	0.38	0.02	1.22	.18	.38	1272	988.4	352.9	47.5
81.75	0.96	0.38	0.02	1.36	.13	.33	1294	988.9	351.5	47.9
82.00	0.94	0.39	0.02	1.35	.12	.33	1297	989.4	350.1	48.3
82.25	0.73	0.39	0.03	1.14	.20	.40	1267	989.9	348.6	48.7
82.50	0.72	0.39	0.03	1.13	.21	.41	1263	990.4	347.1	49.1
82.75	0.70	0.40	0.03	1.13	.21	.41	1262	990.9	345.6	49.4
83.00	0.69	0.40	0.03	1.12	.23	.42	1259	991.4	344.0	49.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40383.25	0.69	0.40	0.03	1.13	-17.23	-17.42	1259	991.9	342.3	50.2
83.50	0.70	0.41	0.03	1.14	.22	.41	1262	992.4	340.6	50.5
83.75	0.73	0.42	0.03	1.18	.21	.40	1269	993.0	338.9	50.8
84.00	0.73	0.42	0.03	1.18	.21	.40	1269	993.5	337.1	51.2
84.25	0.96	0.42	0.03	1.41	.13	.32	1305	994.0	335.2	51.5
84.50	1.07	0.43	0.03	1.53	.09	.28	1322	994.5	333.3	51.8
84.75	0.88	0.43	0.03	1.34	.15	.34	1296	994.9	331.3	52.2
85.00	0.83	0.43	0.03	1.30	.17	.35	1290	995.4	329.3	52.5
85.25	0.81	0.44	0.03	1.28	.18	.36	1288	995.9	327.2	52.8
85.50	0.79	0.44	0.03	1.27	.19	.36	1286	996.4	325.0	53.0
85.75	0.78	0.44	0.04	1.26	.20	.37	1283	996.9	322.7	53.3
86.00	0.76	0.45	0.04	1.24	.20	.38	1280	997.4	320.4	53.6
86.25	0.76	0.45	0.04	1.25	.20	.37	1282	997.9	318.0	53.8
86.50	0.75	0.45	0.04	1.23	.20	.38	1282	998.4	315.5	54.1
86.75	0.83	0.46	0.04	1.33	.17	.34	1299	998.9	313.0	54.3
40444.25	0.67	0.00	0.02	.69	-17.33	-17.42	1179	1003.7	76.2	-39.3
44.50	0.67	0.00	0.02	.69	.33	.42	1178	1004.0	75.6	-39.7
44.75	0.68	0.00	0.02	.70	.33	.41	1181	1004.2	75.0	-40.2
45.00	0.67	0.00	0.02	.69	.33	.42	1176	1004.5	74.4	-40.6
45.25	0.69	0.00	0.02	.72	.32	.41	1183	1004.8	73.7	-41.0
45.50	0.68	0.00	0.02	.70	.33	.43	1173	1005.0	73.1	-41.5
45.75	0.67	0.00	0.02	.69	.34	.43	1169	1005.3	72.5	-41.9
46.00	0.59	0.00	0.02	.61	.39	.48	1138	1005.6	71.9	-42.4
46.25	0.54	0.00	0.02	.56	.43	.51	1119	1005.9	71.3	-42.8
46.50	0.52	0.00	0.02	.54	.44	.52	1110	1006.2	70.7	-43.2
46.75	0.50	0.00	0.02	.53	.44	.52	1106	1006.5	70.1	-43.7
47.00	0.49	0.00	0.02	.52	.45	.53	1103	1006.8	69.5	-44.1
47.25	0.49	0.00	0.02	.51	.46	.53	1096	1007.1	68.8	-44.6
47.50	0.48	0.00	0.02	.50	.47	.55	1089	1007.4	68.2	-45.0
47.75	0.47	0.00	0.02	.49	.48	.55	1083	1007.7	67.6	-45.4
48.00	0.47	0.00	0.02	.49	.47	.55	1086	1008.1	67.0	-45.9
48.25	0.45	0.00	0.02	.47	.49	.56	1077	1008.4	66.4	-46.3
48.50	0.45	0.00	0.02	.47	.48	.56	1076	1008.7	65.7	-46.7
48.75	0.45	0.00	0.02	.47	.49	.56	1074	1009.1	65.1	-47.2
49.00	0.44	0.00	0.02	.46	.50	.57	1066	1009.4	64.5	-47.6
49.25	0.43	0.00	0.02	.46	.49	.56	1067	1009.7	63.9	-48.0
49.50	0.43	0.00	0.02	.45	.50	.57	1063	1010.1	63.2	-48.4
49.75	0.43	0.00	0.02	.45	.50	.57	1061	1010.4	62.6	-48.9
50.00	0.44	0.00	0.02	.47	.48	.55	1072	1010.8	62.0	-49.3
50.25	0.43	0.00	0.02	.45	.51	.58	1056	1011.1	61.4	-49.7
50.50	0.43	0.00	0.02	.45	.51	.58	1055	1011.5	60.7	-50.1
50.75	0.41	0.00	0.02	.44	.51	.58	1053	1011.8	60.1	-50.6
51.00	0.41	0.00	0.03	.44	.51	.57	1054	1012.2	59.4	-51.0
51.25	0.40	0.00	0.03	.43	.52	.59	1044	1012.5	58.8	-51.4
51.50	0.42	0.00	0.03	.45	.50	.56	1057	1012.9	58.2	-51.8
51.75	0.41	0.00	0.03	.44	.51	.58	1049	1013.2	57.5	-52.3
52.00	0.41	0.00	0.03	.44	.51	.58	1048	1013.6	56.9	-52.7
52.25	0.40	0.00	0.03	.43	.52	.58	1042	1013.9	56.2	-53.1
52.50	0.41	0.00	0.03	.44	.52	.58	1045	1014.3	55.6	-53.5
52.75	0.42	0.00	0.03	.44	.52	.58	1044	1014.7	54.9	-54.0
53.00	0.40	0.00	0.03	.43	.53	.59	1035	1015.0	54.2	-54.4
53.25	0.40	0.00	0.03	.43	.53	.59	1035	1015.4	53.6	-54.8
53.50	0.41	0.00	0.03	.43	.52	.58	1037	1015.8	52.9	-55.2
53.75	0.40	0.00	0.03	.43	.52	.58	1039	1016.2	52.3	-55.6
54.00	0.40	0.00	0.03	.43	.52	.58	1039	1016.5	51.6	-56.1
54.25	0.42	0.00	0.03	.45	.50	.56	1051	1016.9	50.9	-56.5
54.50	0.42	0.00	0.03	.45	.50	.56	1051	1017.3	50.2	-56.9
54.75	0.41	0.00	0.03	.44	.51	.57	1044	1017.7	49.6	-57.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40455.00	0.42	0.00	0.03	.46	-17.50	-17.55	1054	1018.1	48.9	-57.7
55.25	0.43	0.00	0.03	.46	.50	.55	1054	1018.4	48.2	-58.2
55.50	0.45	0.00	0.03	.48	.47	.53	1067	1018.8	47.5	-58.6
55.75	0.45	0.00	0.03	.49	.47	.52	1071	1019.2	46.8	-59.0
56.00	0.45	0.00	0.03	.48	.48	.53	1062	1019.6	46.1	-59.4
56.25	0.46	0.00	0.04	.52	.45	.50	1081	1020.0	45.4	-59.8
56.50	0.49	0.00	0.04	.53	.45	.50	1085	1020.4	44.7	-60.2
56.75	0.49	0.00	0.04	.52	.45	.50	1079	1020.7	44.0	-60.6
57.00	0.51	0.00	0.04	.55	.43	.48	1095	1021.1	43.3	-61.1
57.25	0.54	0.00	0.04	.58	.41	.46	1109	1021.5	42.6	-61.5
57.50	0.53	0.00	0.04	.57	.41	.46	1104	1021.9	41.8	-61.9
57.75	0.54	0.00	0.04	.58	.41	.46	1108	1022.3	41.1	-62.3
58.00	0.55	0.00	0.04	.59	.40	.45	1111	1022.7	40.4	-62.7
58.25	0.55	0.00	0.04	.59	.40	.45	1109	1023.1	39.6	-63.1
58.50	0.54	0.00	0.04	.58	.41	.46	1106	1023.5	38.9	-63.5
58.75	0.53	0.00	0.04	.58	.41	.45	1108	1023.9	38.1	-63.9
59.00	0.55	0.02	0.04	.62	.38	.43	1125	1024.3	37.4	-64.3
59.25	0.55	0.06	0.04	.65	.36	.41	1136	1024.7	36.6	-64.7
59.50	0.57	0.09	0.04	.70	.34	.39	1150	1025.1	35.8	-65.1
59.75	0.58	0.12	0.05	.75	.32	.36	1164	1025.5	35.0	-65.5
60.00	0.59	0.15	0.05	.78	.30	.35	1174	1025.9	34.3	-66.0
60.25	0.59	0.17	0.05	.81	.29	.34	1181	1026.3	33.5	-66.4
60.50	0.53	0.19	0.05	.77	.31	.36	1166	1026.7	32.7	-66.8
60.75	0.50	0.21	0.05	.75	.32	.37	1161	1027.1	31.8	-67.2
61.00	0.48	0.23	0.05	.76	.31	.35	1167	1027.5	31.0	-67.6
61.25	0.48	0.24	0.05	.77	.31	.35	1169	1027.9	30.2	-68.0
61.50	0.47	0.25	0.05	.77	.31	.35	1169	1028.3	29.3	-68.4
61.75	0.47	0.26	0.05	.78	.30	.34	1172	1028.7	28.5	-68.8
62.00	0.46	0.27	0.05	.79	.30	.34	1174	1029.1	27.6	-69.2
62.25	0.46	0.28	0.05	.80	.29	.33	1178	1029.5	26.8	-69.5
62.50	0.45	0.29	0.05	.79	.30	.34	1174	1029.9	25.9	-69.9
62.75	0.44	0.30	0.05	.79	.30	.34	1173	1030.3	25.0	-70.3
63.00	0.44	0.31	0.05	.80	.30	.33	1175	1030.7	24.1	-70.7
63.25	0.42	0.32	0.05	.79	.30	.34	1173	1031.1	23.1	-71.1
63.50	0.41	0.32	0.06	.79	.31	.34	1171	1031.5	22.2	-71.5
63.75	0.43	0.33	0.06	.81	.30	.33	1175	1031.9	21.2	-71.9
64.00	0.43	0.33	0.06	.82	.29	.33	1178	1032.3	20.3	-72.3
64.25	0.41	0.34	0.06	.81	.30	.33	1176	1032.8	19.3	-72.7
64.50	0.42	0.35	0.06	.82	.30	.33	1178	1033.2	18.3	-73.0
64.75	0.40	0.35	0.06	.81	.30	.33	1173	1033.6	17.2	-73.4
65.00	0.40	0.36	0.06	.81	.30	.33	1174	1034.0	16.2	-73.8
65.25	0.37	0.37	0.06	.80	.31	.34	1170	1034.4	15.1	-74.2
65.50	0.35	0.38	0.06	.79	.32	.34	1167	1034.8	14.0	-74.6
65.75	0.35	0.38	0.06	.79	.31	.34	1169	1035.2	12.9	-74.9
66.00	0.32	0.38	0.06	.76	.33	.35	1159	1035.6	11.8	-75.3
66.25	0.29	0.38	0.06	.74	.34	.37	1151	1036.1	10.6	-75.7
66.50	0.29	0.39	0.06	.74	.34	.37	1151	1036.5	9.4	-76.0
66.75	0.26	0.39	0.06	.71	.36	.39	1139	1036.9	8.2	-76.4
67.00	0.27	0.40	0.06	.73	.35	.37	1147	1037.3	7.0	-76.7
67.25	0.25	0.40	0.06	.71	.36	.39	1139	1037.7	5.7	-77.1
67.50	0.25	0.40	0.06	.71	.37	.39	1137	1038.1	4.4	-77.4
67.75	0.23	0.41	0.07	.70	.38	.40	1132	1038.5	3.0	-77.8
68.00	0.21	0.41	0.07	.69	.39	.41	1125	1038.9	1.6	-78.1
68.25	0.21	0.42	0.07	.70	.38	.40	1129	1039.3	0.2	-78.4
68.50	0.21	0.42	0.07	.70	.38	.40	1130	1039.8	358.7	-78.8
68.75	0.19	0.42	0.07	.68	.39	.41	1122	1040.2	357.2	-79.1
69.00	0.17	0.42	0.07	.66	.41	.42	1112	1040.6	355.7	-79.4
69.25	0.17	0.43	0.07	.67	.40	.42	1117	1041.0	354.1	-79.7
69.50	0.20	0.43	0.07	.70	.38	.40	1129	1041.3	352.4	-80.0
69.75	0.22	0.43	0.07	.73	.38	.39	1134	1041.7	350.7	-80.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_s$	$\log \rho_g$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40470.00	0.20	0.43	0.07	.71	-17.40	-17.41	1121	1042.1	348.9	-80.6
70.25	0.23	0.44	0.07	.74	.38	.39	1132	1042.5	347.1	-80.9
70.50	0.23	0.44	0.07	.74	.38	.39	1132	1042.9	345.2	-81.1
70.75	0.19	0.44	0.07	.70	.40	.41	1121	1043.3	343.3	-81.4
40516.25	0.39	0.02	0.01	.42	-17.70	-17.68	878	1056.3	124.7	9.2
16.50	0.42	0.02	0.01	.45	.67	.65	896	1055.9	124.1	9.8
16.75	0.45	0.01	0.01	.47	.65	.63	907	1055.5	123.5	10.4
17.00	0.48	0.01	0.01	.50	.62	.61	926	1055.1	122.9	11.1
17.25	0.53	0.01	0.01	.54	.58	.57	948	1054.7	122.3	11.7
17.50	0.54	0.00	0.01	.55	.57	.56	954	1054.3	121.7	12.3
17.75	0.57	0.00	0.01	.58	.54	.54	971	1053.9	121.1	12.9
18.00	0.63	0.00	0.00	.63	.51	.50	992	1053.5	120.6	13.5
18.25	0.72	0.00	0.00	.72	.45	.45	1024	1053.1	120.0	14.1
18.50	0.71	0.00	0.00	.71	.46	.45	1018	1052.7	119.4	14.7
18.75	0.72	0.00	0.00	.73	.45	.44	1027	1052.2	118.8	15.3
19.00	0.74	0.00	0.00	.75	.43	.43	1035	1051.8	118.2	15.9
19.25	0.75	0.00	0.00	.76	.42	.42	1038	1051.3	117.6	16.6
19.50	0.76	0.00	0.00	.76	.42	.42	1039	1050.9	117.0	17.2
19.75	0.76	0.00	0.00	.76	.41	.41	1041	1050.4	116.4	17.8
20.00	0.76	0.00	0.00	.76	.41	.41	1039	1050.0	115.9	18.4
20.25	0.77	0.00	0.00	.77	.41	.41	1042	1049.5	115.3	19.0
20.50	0.78	0.00	0.00	.78	.40	.40	1046	1049.0	114.7	19.6
20.75	0.78	0.00	0.00	.78	.40	.40	1046	1048.6	114.1	20.2
21.00	0.80	0.00	0.00	.80	.38	.39	1053	1048.1	113.5	20.8
21.25	0.84	0.00	0.00	.84	.36	.36	1066	1047.6	112.9	21.4
21.50	0.88	0.00	0.00	.88	.34	.34	1078	1047.1	112.3	22.0
21.75	0.88	0.00	0.00	.88	.34	.35	1077	1046.6	111.7	22.6
22.00	0.92	0.00	0.00	.91	.32	.33	1085	1046.2	111.1	23.3
22.25	0.92	0.00	0.00	.92	.32	.33	1087	1045.7	110.5	23.9
22.50	0.91	0.00	0.00	.91	.32	.33	1086	1045.2	109.9	24.5
22.75	0.90	0.00	0.00	.90	.32	.33	1083	1044.7	109.3	25.1
23.00	0.90	0.00	0.00	.89	.32	.33	1079	1044.2	108.7	25.7
23.25	0.86	0.00	0.00	.85	.34	.35	1066	1043.7	108.1	26.3
23.50	0.85	0.00	0.00	.85	.33	.35	1067	1043.3	107.5	26.9
23.75	0.80	0.00	0.00	.80	.36	.37	1052	1042.8	107.0	27.5
24.00	0.77	0.00	0.00	.76	.38	.39	1037	1042.3	106.4	28.1
24.25	0.75	0.00	0.00	.75	.38	.39	1033	1041.8	105.8	28.7
24.50	0.75	0.00	0.00	.74	.38	.40	1031	1041.4	105.2	29.3
24.75	0.77	0.00	0.00	.77	.36	.38	1042	1040.9	104.6	29.9
25.00	0.79	0.00	0.00	.79	.34	.36	1050	1040.4	104.0	30.5
25.25	0.79	0.00	0.00	.78	.35	.37	1045	1040.0	103.4	31.1
25.50	0.79	0.00	0.00	.78	.35	.37	1042	1039.6	102.8	31.7
25.75	0.78	0.00	0.00	.78	.35	.37	1041	1039.1	102.2	32.3
26.00	0.77	0.00	0.00	.77	.35	.37	1039	1038.7	101.5	32.9
26.25	0.77	0.00	0.00	.76	.35	.37	1036	1038.3	100.9	33.5
26.50	0.77	0.00	0.00	.76	.35	.37	1037	1037.9	100.3	34.1
26.75	0.76	0.00	0.00	.76	.34	.37	1038	1037.5	99.7	34.7
27.00	0.76	0.00	0.00	.76	.34	.37	1037	1037.1	99.1	35.3
27.25	0.75	0.00	0.00	.74	.35	.38	1027	1036.7	98.5	35.9
27.50	0.75	0.00	0.00	.74	.35	.38	1025	1036.3	97.9	36.5
27.75	0.74	0.00	0.00	.74	.35	.38	1024	1035.9	97.3	37.1
28.00	0.73	0.00	0.00	.73	.36	.39	1018	1035.5	96.7	37.7
28.25	0.75	0.00	0.00	.74	.35	.38	1021	1035.1	96.1	38.3
28.50	0.74	0.00	0.00	.74	.35	.38	1020	1034.7	95.5	38.8
28.75	0.75	0.00	0.00	.74	.34	.38	1021	1034.3	94.9	39.4
29.00	0.75	0.00	0.00	.75	.34	.37	1025	1034.0	94.2	40.0
29.25	0.74	0.00	0.00	.73	.34	.38	1017	1033.6	93.6	40.6
29.50	0.72	0.00	0.00	.72	.35	.38	1015	1033.2	93.0	41.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π ($^\circ\text{K}$)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40529.75	0.70	0.00	0.00	.70	-17.35	-17.38	1009	1032.9	92.4	41.8
30.00	0.69	0.00	0.00	.69	.35	.39	1006	1032.5	91.8	42.4
30.25	0.69	0.00	0.00	.69	.35	.39	1005	1032.2	91.1	43.0
30.50	0.69	0.00	0.00	.69	.35	.39	1004	1031.9	90.5	43.6
30.75	0.68	0.00	0.00	.68	.36	.39	998	1031.5	89.9	44.1
31.00	0.67	0.00	0.00	.67	.36	.40	994	1031.2	89.3	44.7
31.25	0.65	0.00	0.00	.66	.36	.40	991	1030.9	88.6	45.3
31.50	0.63	0.00	0.00	.63	.38	.42	978	1030.6	88.0	45.9
31.75	0.65	0.00	0.00	.65	.36	.40	988	1030.2	87.4	46.5
32.00	0.67	0.00	0.00	.67	.35	.39	995	1029.9	86.8	47.1
32.25	0.69	0.00	0.00	.69	.34	.38	999	1029.6	86.1	47.7
32.50	0.70	0.00	0.00	.70	.33	.38	1000	1029.3	85.5	48.2
32.75	0.74	0.00	0.01	.74	.31	.35	1016	1029.0	84.8	48.8
33.00	0.78	0.00	0.01	.78	.29	.33	1030	1028.7	84.2	49.4
33.25	0.80	0.00	0.01	.80	.27	.31	1038	1028.4	83.6	50.0
33.50	0.80	0.00	0.01	.81	.26	.30	1042	1028.2	82.9	50.6
33.75	0.83	0.00	0.01	.84	.25	.29	1052	1027.9	82.3	51.1
34.00	0.83	0.00	0.01	.84	.25	.29	1048	1027.6	81.6	51.7
34.25	0.84	0.00	0.01	.85	.24	.29	1050	1027.3	81.0	52.3
34.50	0.84	0.00	0.01	.85	.24	.29	1048	1027.0	80.3	52.9
34.75	0.85	0.00	0.01	.86	.24	.29	1049	1026.7	79.7	53.4
35.00	0.86	0.00	0.01	.87	.23	.28	1054	1026.5	79.0	54.0
35.25	0.79	0.00	0.01	.81	.25	.30	1036	1026.2	78.4	54.6
35.50	0.78	0.00	0.01	.79	.27	.31	1026	1025.9	77.7	55.2
35.75	0.76	0.00	0.01	.78	.27	.32	1019	1025.6	77.1	55.7
36.00	0.64	0.00	0.02	.65	.35	.40	965	1025.3	76.4	56.3
36.25	0.59	0.00	0.02	.61	.37	.42	951	1025.1	75.7	56.9
36.50	0.60	0.00	0.02	.62	.35	.40	959	1024.8	75.1	57.5
36.75	0.63	0.00	0.02	.64	.34	.39	966	1024.5	74.4	58.0
37.00	0.65	0.00	0.02	.67	.32	.37	979	1024.3	73.7	58.6
37.25	0.64	0.00	0.02	.66	.32	.37	975	1024.0	73.0	59.2
37.50	0.65	0.00	0.02	.67	.31	.36	980	1023.7	72.4	59.7
37.75	0.64	0.00	0.02	.66	.31	.36	978	1023.5	71.7	60.3
38.00	0.65	0.00	0.02	.67	.31	.35	982	1023.2	71.0	60.9
38.25	0.65	0.00	0.02	.67	.30	.35	982	1023.0	70.3	61.4
38.50	0.64	0.00	0.02	.67	.30	.35	981	1022.7	69.6	62.0
38.75	0.63	0.00	0.02	.65	.31	.36	971	1022.5	68.9	62.6
39.00	0.64	0.00	0.02	.67	.30	.35	979	1022.2	68.2	63.1
39.25	0.66	0.00	0.02	.69	.29	.34	988	1022.0	67.5	63.7
39.50	0.66	0.00	0.03	.69	.28	.33	989	1021.7	66.8	64.2
39.75	0.67	0.00	0.03	.69	.28	.33	990	1021.5	66.1	64.8
40.00	0.66	0.00	0.03	.68	.28	.33	985	1021.2	65.4	65.4
40.25	0.66	0.00	0.03	.69	.27	.33	989	1021.0	64.7	65.9
40.50	0.66	0.00	0.03	.69	.27	.33	988	1020.7	63.9	66.5
40.75	0.65	0.00	0.03	.68	.28	.33	982	1020.5	63.2	67.0
41.00	0.66	0.00	0.03	.68	.28	.33	981	1020.3	62.5	67.6
41.25	0.66	0.00	0.03	.69	.27	.32	985	1020.0	61.8	68.2
41.50	0.67	0.00	0.03	.70	.26	.32	989	1019.8	61.0	68.7
41.75	0.69	0.00	0.03	.72	.25	.31	996	1019.6	60.3	69.3
42.00	0.69	0.00	0.03	.72	.25	.31	993	1019.4	59.5	69.8
42.25	0.68	0.00	0.03	.71	.26	.31	988	1019.1	58.8	70.4
42.50	0.71	0.00	0.03	.74	.24	.29	1001	1018.9	58.0	70.9
42.75	0.72	0.00	0.03	.75	.23	.29	1004	1018.7	57.2	71.5
43.00	0.75	0.00	0.03	.78	.21	.27	1013	1018.5	56.5	72.0
43.25	0.79	0.00	0.03	.82	.19	.25	1026	1018.3	55.7	72.6
43.50	0.81	0.00	0.03	.85	.18	.23	1037	1018.1	54.9	73.1
43.75	0.83	0.00	0.03	.87	.17	.23	1042	1017.9	54.1	73.6
44.00	0.82	0.00	0.03	.86	.17	.23	1037	1017.8	53.3	74.2
44.25	0.83	0.00	0.03	.86	.17	.23	1036	1017.6	52.5	74.7
44.50	0.81	0.00	0.03	.84	.18	.24	1028	1017.4	51.7	75.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40544.75	0.82	0.00	0.03	.85	-17.18	-17.24	1029	1017.2	50.9	75.8
45.00	0.86	0.00	0.03	.90	.16	.22	1043	1017.1	50.0	76.4
45.25	0.85	0.00	0.03	.86	.17	.23	1034	1016.9	49.2	76.9
45.50	0.81	0.00	0.03	.85	.18	.24	1026	1016.8	48.3	77.4
45.75	0.76	0.00	0.03	.79	.20	.27	1005	1016.6	47.5	78.0
46.00	0.76	0.00	0.03	.80	.20	.26	1009	1016.5	46.6	78.5
46.25	0.76	0.00	0.03	.79	.20	.27	1004	1016.4	45.7	79.0
46.50	0.79	0.00	0.03	.83	.18	.24	1019	1016.3	44.8	79.6
46.75	0.80	0.00	0.03	.84	.18	.24	1021	1016.1	43.9	80.1
47.00	0.83	0.00	0.03	.86	.17	.23	1027	1016.0	43.0	80.6
47.25	0.90	0.00	0.04	.93	.14	.20	1047	1015.9	42.1	81.1
47.50	0.96	0.00	0.04	.99	.11	.18	1062	1015.9	41.2	81.7
47.75	0.94	0.00	0.04	.98	.11	.18	1060	1015.8	40.2	82.2
48.00	0.91	0.00	0.04	.95	.13	.19	1050	1015.7	39.2	82.7
48.25	0.91	0.00	0.04	.95	.13	.19	1050	1015.6	38.3	83.2
48.50	0.90	0.00	0.04	.94	.13	.19	1048	1015.6	37.3	83.8
48.75	0.88	0.00	0.04	.92	.14	.20	1040	1015.5	36.3	84.3
49.00	0.87	0.00	0.04	.90	.15	.22	1031	1015.5	35.2	84.8
49.25	0.87	0.00	0.04	.90	.15	.22	1030	1015.5	34.2	85.3
49.50	0.85	0.01	0.04	.89	.15	.22	1026	1015.5	33.1	85.8
49.75	0.84	0.03	0.04	.91	.14	.21	1031	1015.4	32.0	86.3
50.00	0.83	0.06	0.04	.92	.14	.21	1033	1015.4	30.9	86.8
50.25	0.85	0.08	0.04	.97	.12	.18	1051	1015.5	29.8	87.3
50.50	0.84	0.10	0.04	.98	.11	.17	1055	1015.5	28.7	87.8
50.75	0.83	0.13	0.04	.99	.11	.17	1056	1015.5	27.5	88.3
51.00	0.87	0.15	0.04	1.05	.08	.14	1074	1015.5	26.3	88.8
51.25	0.88	0.17	0.04	1.09	.06	.13	1085	1015.6	25.1	89.3
51.50	0.87	0.19	0.04	1.10	.06	.12	1089	1015.7	23.8	89.8
40614.25	0.49	0.00	-0.05	.44	-17.69	-17.64	1083	1069.1	98.8	-6.5
14.50	0.51	0.00	-0.05	.46	.66	.62	1098	1069.0	98.2	-7.0
14.75	0.53	0.00	-0.05	.48	.64	.60	1110	1068.9	97.6	-7.6
15.00	0.53	0.00	-0.05	.48	.65	.60	1108	1068.9	97.0	-8.2
15.25	0.57	0.00	-0.05	.52	.61	.57	1129	1068.8	96.3	-8.8
15.50	0.57	0.00	-0.05	.52	.61	.56	1130	1068.7	95.7	-9.4
15.75	0.53	0.00	-0.05	.48	.64	.60	1111	1068.7	95.1	-9.9
16.00	0.51	0.00	-0.05	.47	.65	.61	1108	1068.6	94.4	-10.5
16.25	0.51	0.00	-0.05	.46	.66	.61	1102	1068.5	93.8	-11.1
16.50	0.49	0.00	-0.05	.45	.67	.62	1097	1068.5	93.2	-11.7
16.75	0.51	0.00	-0.05	.46	.66	.61	1104	1068.4	92.5	-12.3
17.00	0.63	0.00	-0.05	.58	.55	.51	1162	1068.4	91.9	-12.9
17.25	0.69	0.00	-0.04	.64	.51	.46	1186	1068.3	91.2	-13.4
17.50	0.51	0.00	-0.04	.47	.64	.60	1112	1068.3	90.6	-14.0
17.75	0.44	0.00	-0.04	.39	.72	.68	1065	1068.2	90.0	-14.6
18.00	0.44	0.00	-0.04	.39	.72	.68	1066	1068.2	89.3	-15.2
18.25	0.44	0.00	-0.04	.39	.72	.68	1066	1068.2	88.7	-15.8
18.50	0.46	0.00	-0.04	.42	.69	.65	1086	1068.1	88.0	-16.3
18.75	0.50	0.00	-0.04	.46	.64	.60	1112	1068.1	87.4	-16.9
19.00	0.52	0.00	-0.04	.48	.63	.59	1122	1068.1	86.7	-17.5
19.25	0.56	0.00	-0.04	.52	.59	.55	1141	1068.0	86.1	-18.1
19.50	0.57	0.00	-0.04	.53	.58	.54	1145	1068.0	85.4	-18.7
19.75	0.65	0.00	-0.04	.61	.52	.48	1180	1068.0	84.8	-19.2
20.00	0.61	0.00	-0.04	.57	.55	.51	1164	1068.0	84.1	-19.8
20.25	0.59	0.00	-0.04	.55	.57	.52	1156	1068.0	83.5	-20.4
20.50	0.55	0.00	-0.04	.51	.60	.55	1139	1068.0	82.8	-21.0
20.75	0.52	0.00	-0.04	.48	.62	.58	1126	1068.0	82.2	-21.6
21.00	0.49	0.00	-0.04	.45	.65	.61	1111	1068.0	81.5	-22.1
21.25	0.52	0.00	-0.03	.48	.62	.58	1128	1068.0	80.8	-22.7
21.50	0.52	0.00	-0.03	.49	.61	.57	1132	1068.0	80.2	-23.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40621.75	0.54	0.00	-0.03	.51	-17.59	-17.55	1140	1068.0	79.5	-23.9
22.00	0.55	0.00	-0.03	.51	.59	.55	1139	1068.0	78.8	-24.5
22.25	0.55	0.00	-0.03	.51	.59	.55	1140	1068.1	78.2	-25.0
22.50	0.54	0.00	-0.03	.51	.59	.55	1142	1068.1	77.5	-25.6
22.75	0.52	0.00	-0.03	.49	.61	.57	1133	1068.1	76.8	-26.2
23.00	0.53	0.00	-0.03	.50	.60	.56	1138	1068.1	76.1	-26.8
23.25	0.52	0.00	-0.03	.49	.60	.56	1134	1068.2	75.4	-27.4
23.50	0.54	0.00	-0.03	.51	.58	.54	1145	1068.2	74.7	-27.9
23.75	0.54	0.00	-0.03	.51	.58	.54	1148	1068.2	74.1	-28.5
24.00	0.54	0.00	-0.03	.51	.58	.54	1147	1068.3	73.4	-29.1
24.25	0.55	0.00	-0.03	.52	.57	.53	1152	1068.3	72.7	-29.7
24.50	0.55	0.00	-0.03	.52	.57	.53	1152	1068.3	72.0	-30.2
24.75	0.56	0.00	-0.02	.54	.55	.51	1161	1068.4	71.3	-30.8
25.00	0.58	0.00	-0.02	.56	.54	.50	1169	1068.4	70.6	-31.4
25.25	0.60	0.00	-0.02	.57	.53	.49	1174	1068.5	69.9	-32.0
25.50	0.62	0.00	-0.02	.60	.51	.47	1186	1068.5	69.1	-32.6
25.75	0.63	0.00	-0.02	.61	.50	.46	1188	1068.6	68.4	-33.1
26.00	0.66	0.00	-0.02	.64	.48	.44	1199	1068.6	67.7	-33.7
26.25	0.70	0.00	-0.02	.68	.45	.41	1212	1068.7	67.0	-34.3
26.50	0.74	0.00	-0.02	.72	.43	.39	1224	1068.7	66.3	-34.9
26.75	0.78	0.00	-0.02	.76	.41	.36	1236	1068.8	65.5	-35.4
27.00	0.80	0.00	-0.02	.79	.39	.34	1244	1068.8	64.8	-36.0
27.25	0.83	0.00	-0.02	.82	.37	.33	1252	1068.9	64.0	-36.6
27.50	0.85	0.00	-0.01	.84	.36	.32	1257	1069.0	63.3	-37.2
27.75	0.91	0.00	-0.01	.89	.34	.29	1268	1069.0	62.5	-37.7
28.00	0.96	0.00	-0.01	.94	.31	.26	1279	1069.1	61.8	-38.3
28.25	0.97	0.00	-0.01	.96	.30	.26	1284	1069.2	61.0	-38.9
28.50	0.98	0.00	-0.01	.97	.30	.25	1286	1069.3	60.2	-39.4
28.75	0.97	0.00	-0.01	.96	.30	.25	1284	1069.3	59.5	-40.0
29.00	0.95	0.00	-0.01	.94	.31	.26	1279	1069.4	58.7	-40.6
29.25	0.94	0.00	-0.01	.93	.32	.27	1277	1069.5	57.9	-41.2
29.50	0.94	0.00	-0.01	.94	.31	.26	1279	1069.6	57.1	-41.7
29.75	0.96	0.00	-0.01	.95	.31	.26	1280	1069.7	56.3	-42.3
30.00	0.96	0.00	0.00	.96	.30	.25	1283	1069.8	55.5	-42.9
30.25	0.98	0.00	0.00	.97	.30	.24	1285	1069.8	54.7	-43.4
30.50	1.00	0.00	0.00	.99	.29	.23	1289	1069.9	53.8	-44.0
30.75	1.02	0.00	0.00	1.02	.27	.22	1296	1070.0	53.0	-44.6
31.00	1.05	0.00	0.00	1.05	.26	.21	1301	1070.1	52.1	-45.1
31.25	1.11	0.00	0.00	1.11	.24	.18	1313	1070.2	51.3	-45.7
31.50	1.09	0.00	0.00	1.09	.25	.19	1309	1070.3	50.4	-46.3
31.75	1.05	0.00	0.00	1.05	.26	.20	1301	1070.4	49.5	-46.8
32.00	1.01	0.00	0.00	1.02	.28	.22	1293	1070.5	48.7	-47.4
32.25	1.00	0.00	0.00	1.01	.28	.23	1289	1070.7	47.8	-48.0
32.50	1.01	0.00	0.01	1.01	.28	.22	1290	1070.8	46.8	-48.5
32.75	0.99	0.00	0.01	1.00	.29	.23	1287	1070.9	45.9	-49.1
33.00	1.00	0.00	0.01	1.01	.29	.23	1287	1071.0	45.0	-49.6
33.25	1.02	0.00	0.01	1.02	.28	.22	1288	1071.2	44.0	-50.2
33.50	1.04	0.00	0.01	1.05	.27	.21	1294	1071.3	43.0	-50.8
33.75	1.06	0.00	0.01	1.07	.26	.20	1297	1071.5	42.1	-51.3
34.00	1.08	0.00	0.01	1.09	.26	.20	1300	1071.6	41.1	-51.9
34.25	1.09	0.00	0.01	1.11	.25	.19	1303	1071.8	40.0	-52.4
34.50	1.20	0.00	0.01	1.21	.21	.16	1320	1071.9	39.0	-53.0
34.75	1.23	0.00	0.01	1.25	.20	.14	1326	1072.1	38.0	-53.5
35.00	1.29	0.00	0.02	1.31	.18	.12	1336	1072.3	36.9	-54.1
35.25	1.24	0.00	0.02	1.25	.20	.14	1325	1072.5	35.8	-54.6
35.50	1.17	0.00	0.02	1.19	.23	.16	1313	1072.7	34.7	-55.2
35.75	1.12	0.01	0.02	1.15	.24	.18	1305	1072.9	33.5	-55.7
36.00	1.08	0.02	0.02	1.12	.25	.19	1299	1073.1	32.3	-56.2
36.25	1.04	0.04	0.02	1.09	.27	.20	1292	1073.3	31.1	-56.8
36.50	0.98	0.05	0.02	1.06	.28	.22	1285	1073.5	29.9	-57.3

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40636.75	0.96	0.06	0.02	1.04	-17.29	-17.23	1280	1073.7	28.7	-57.8
37.00	0.93	0.08	0.02	1.03	.30	.23	1277	1074.0	27.4	-58.4
37.25	0.92	0.09	0.03	1.04	.29	.23	1279	1074.2	26.1	-58.9
37.50	0.88	0.11	0.03	1.01	.31	.25	1271	1074.5	24.7	-59.4
37.75	0.86	0.12	0.03	1.00	.31	.25	1268	1074.7	23.3	-59.9
38.00	0.82	0.13	0.03	.98	.32	.26	1262	1075.0	21.9	-60.4
38.25	0.79	0.15	0.03	.96	.33	.27	1257	1075.2	20.4	-60.9
38.50	0.74	0.16	0.03	.92	.35	.29	1247	1075.5	18.9	-61.5
38.75	0.72	0.17	0.03	.92	.36	.29	1246	1075.8	17.3	-61.9
39.00	0.69	0.18	0.03	.90	.37	.30	1240	1076.0	15.7	-62.4
39.25	0.66	0.19	0.03	.89	.37	.31	1237	1076.3	14.0	-62.9
39.50	0.66	0.21	0.03	.90	.37	.30	1239	1076.6	12.3	-63.4
39.75	0.65	0.22	0.04	.90	.37	.31	1238	1076.9	10.5	-63.9
40.00	0.64	0.23	0.04	.91	.37	.30	1240	1077.2	8.7	-64.3
40.25	0.63	0.24	0.04	.91	.37	.30	1239	1077.5	6.8	-64.8
40.50	0.63	0.24	0.04	.91	.37	.30	1239	1077.8	4.8	-65.2
40.75	0.62	0.25	0.04	.91	.37	.30	1238	1078.1	2.8	-65.7
41.00	0.60	0.26	0.04	.90	.38	.31	1233	1078.4	0.7	-66.1
41.25	0.60	0.27	0.04	.91	.37	.30	1234	1078.7	358.5	-66.5
41.50	0.60	0.28	0.04	.92	.37	.30	1236	1079.0	356.3	-66.9
41.75	0.64	0.28	0.04	.97	.35	.28	1246	1079.3	353.9	-67.3
42.00	0.71	0.29	0.04	1.04	.32	.25	1260	1079.6	351.5	-67.7
42.25	0.64	0.30	0.04	.98	.35	.28	1247	1080.0	349.0	-68.0
42.50	0.57	0.30	0.04	.91	.38	.31	1229	1080.3	346.4	-68.4
42.75	0.54	0.31	0.05	.90	.38	.31	1226	1080.6	343.7	-68.7
43.00	0.54	0.32	0.05	.90	.38	.32	1227	1080.9	341.0	-69.0
43.25	0.55	0.32	0.05	.92	.38	.31	1230	1081.3	338.1	-69.3
43.50	0.57	0.33	0.05	.95	.37	.29	1235	1081.6	335.2	-69.6
40684.50	0.72	-0.07	0.00	.65	-17.59	-17.48	1028	1110.6	149.2	-11.9
85.00	0.75	-0.08	0.00	.67	.58	.47	1038	1110.1	148.0	-11.0
85.50	0.78	-0.09	0.00	.68	.57	.46	1040	1109.6	146.8	-10.2
86.00	0.77	-0.10	0.00	.66	.59	.47	1032	1108.9	145.7	-9.3
86.50	0.78	-0.11	-0.01	.66	.58	.47	1038	1108.3	144.5	-8.4
87.00	0.78	-0.13	-0.01	.65	.59	.48	1033	1107.6	143.4	-7.5
87.50	0.79	-0.14	-0.01	.64	.60	.49	1025	1106.8	142.2	-6.6
88.00	0.79	-0.15	-0.01	.64	.59	.49	1030	1106.0	141.0	-5.8
88.50	0.80	-0.16	-0.01	.63	.60	.49	1029	1105.2	139.9	-4.9
89.00	0.79	-0.17	-0.01	.61	.61	.51	1022	1104.4	138.7	-4.0
89.50	0.77	-0.17	-0.01	.58	.63	.53	1011	1103.5	137.6	-3.1
90.00	0.73	-0.18	-0.02	.54	.65	.56	994	1102.6	136.4	-2.2
90.50	0.74	-0.19	-0.02	.53	.66	.56	992	1101.7	135.2	-1.4
91.00	0.76	-0.20	-0.02	.54	.65	.56	1001	1100.7	134.1	-0.5
91.50	0.83	-0.21	-0.02	.60	.60	.51	1034	1099.8	132.9	0.4
92.00	0.85	-0.22	-0.02	.61	.59	.50	1038	1098.8	131.7	1.3
40697.75	1.13	-0.25	-0.03	.85	-17.44	-17.36	1150	1088.0	118.1	11.3
98.00	1.17	-0.25	-0.03	.89	.42	.33	1159	1087.5	117.5	11.8
98.25	1.01	-0.25	-0.03	.72	.51	.42	1103	1087.1	116.9	12.2
98.50	0.89	-0.25	-0.03	.60	.59	.51	1056	1086.7	116.3	12.6
40699.00	0.87	-0.24	-0.03	.59	-17.57	-17.51	1069	1085.8	115.1	13.5
99.50	0.83	-0.24	-0.03	.56	.59	.53	1059	1085.0	113.9	14.4
40700.00	0.82	-0.23	-0.03	.55	.60	.54	1052	1084.2	112.7	15.2
00.50	0.79	-0.21	-0.03	.54	.61	.54	1049	1083.4	111.4	16.1
01.00	0.78	-0.20	-0.04	.55	.60	.54	1057	1082.7	110.2	17.0
01.50	0.77	-0.17	-0.04	.56	.59	.53	1064	1081.9	109.0	17.8
02.00	0.77	-0.15	-0.04	.59	.57	.50	1082	1081.2	107.7	18.7

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40702.25	0.78	-0.13	-0.04	.61	-17.55	-17.49	1093	1080.9	107.1	19.1
02.50	0.77	-0.11	-0.04	.62	.54	.48	1102	1080.5	106.5	19.5
02.75	0.77	-0.09	-0.04	.64	.52	.46	1114	1080.2	105.9	20.0
03.00	0.81	-0.07	-0.04	.70	.49	.43	1134	1079.9	105.2	20.4
03.25	0.78	-0.05	-0.04	.70	.49	.43	1132	1079.6	104.6	20.8
03.50	0.63	-0.02	-0.04	.57	.58	.52	1081	1079.3	104.0	21.3
03.75	0.60	0.00	-0.04	.56	.58	.52	1082	1079.0	103.3	21.7
04.00	0.55	0.00	-0.04	.52	.61	.55	1065	1078.7	102.7	22.1
04.25	0.59	0.00	-0.04	.55	.58	.53	1080	1078.4	102.1	22.5
04.50	0.62	0.00	-0.04	.59	.55	.50	1100	1078.1	101.4	23.0
04.75	0.63	0.00	-0.04	.59	.55	.49	1103	1077.8	100.8	23.4
05.00	0.64	0.00	-0.04	.61	.53	.48	1114	1077.6	100.1	23.8
05.25	0.68	0.00	-0.04	.64	.51	.46	1127	1077.3	99.5	24.2
05.50	0.73	0.00	-0.04	.70	.48	.42	1150	1077.1	98.8	24.7
05.75	0.76	0.00	-0.04	.72	.46	.41	1157	1076.8	98.2	25.1
06.00	0.76	0.00	-0.04	.73	.46	.40	1159	1076.6	97.5	25.5
06.25	0.85	0.00	-0.04	.81	.42	.36	1183	1076.3	96.9	25.9
06.50	0.86	0.00	-0.04	.84	.40	.34	1192	1076.1	96.2	26.4
06.75	0.91	0.00	-0.04	.88	.38	.32	1204	1075.9	95.6	26.8
07.00	0.85	0.00	-0.03	.82	.41	.35	1190	1075.7	94.9	27.2
07.25	0.85	0.00	-0.03	.81	.41	.35	1189	1075.5	94.2	27.6
07.50	0.83	0.00	-0.03	.80	.42	.36	1188	1075.3	93.6	28.0
07.75	0.83	0.00	-0.03	.80	.42	.36	1189	1075.1	92.9	28.5
08.00	0.82	0.00	-0.03	.78	.43	.37	1183	1075.0	92.2	28.9
08.25	0.81	0.00	-0.03	.78	.43	.37	1184	1074.8	91.5	29.3
08.50	0.81	0.00	-0.03	.77	.43	.37	1183	1074.6	90.9	29.7
08.75	0.82	0.00	-0.03	.79	.42	.36	1191	1074.5	90.2	30.1
09.00	0.85	0.00	-0.03	.81	.41	.35	1197	1074.4	89.5	30.6
09.25	0.84	0.00	-0.03	.81	.41	.35	1198	1074.2	88.8	31.0
09.50	0.87	0.00	-0.03	.83	.39	.34	1206	1074.1	88.1	31.4
09.75	0.90	0.00	-0.03	.87	.37	.32	1216	1074.0	87.4	31.8
10.00	0.92	0.00	-0.03	.89	.37	.30	1222	1073.9	86.7	32.2
10.25	0.91	0.00	-0.03	.88	.37	.31	1221	1073.8	86.0	32.6
10.50	0.91	0.00	-0.03	.88	.37	.31	1222	1073.7	85.3	33.1
10.75	0.90	0.00	-0.03	.87	.37	.31	1221	1073.6	84.6	33.5
11.00	0.90	0.00	-0.03	.87	.37	.31	1222	1073.6	83.8	33.9
11.25	0.91	0.00	-0.03	.88	.37	.31	1225	1073.5	83.1	34.3
11.50	0.91	0.00	-0.03	.88	.37	.31	1226	1073.5	82.4	34.7
11.75	0.90	0.00	-0.03	.87	.37	.31	1224	1073.4	81.7	35.1
12.00	0.86	0.00	-0.03	.83	.39	.33	1215	1073.4	80.9	35.5
12.25	0.81	0.00	-0.03	.78	.42	.36	1202	1073.4	80.2	36.0
12.50	0.80	0.00	-0.03	.77	.42	.36	1201	1073.4	79.4	36.4
12.75	0.80	0.00	-0.03	.77	.42	.36	1202	1073.4	78.7	36.8
13.00	0.80	0.00	-0.03	.77	.42	.36	1202	1073.4	77.9	37.2
13.25	0.79	0.00	-0.03	.76	.43	.37	1200	1073.4	77.1	37.6
13.50	0.74	0.00	-0.03	.71	.46	.40	1186	1073.4	76.3	38.0
13.75	0.73	0.00	-0.03	.70	.46	.41	1183	1073.5	75.6	38.4
14.00	0.73	0.00	-0.03	.71	.46	.40	1187	1073.5	74.8	38.8
14.25	0.70	0.00	-0.02	.68	.48	.42	1179	1073.6	74.0	39.2
14.50	0.69	0.00	-0.02	.67	.48	.43	1177	1073.7	73.2	39.6
14.75	0.68	0.00	-0.02	.66	.49	.43	1174	1073.8	72.3	40.0
15.00	0.70	0.00	-0.02	.67	.49	.43	1178	1073.9	71.5	40.4
15.25	0.67	0.00	-0.02	.65	.50	.44	1171	1074.0	70.7	40.8
15.50	0.66	0.00	-0.02	.64	.51	.45	1169	1074.2	69.8	41.2
15.75	0.66	0.00	-0.02	.64	.51	.45	1170	1074.3	69.0	41.7
16.00	0.68	0.00	-0.02	.66	.49	.43	1178	1074.5	68.1	42.1
16.25	0.68	0.00	-0.02	.66	.49	.43	1179	1074.7	67.3	42.5
16.50	0.67	0.00	-0.02	.65	.50	.44	1176	1074.8	66.4	42.8
16.75	0.68	0.00	-0.02	.66	.49	.43	1180	1075.0	65.5	43.2
17.00	0.69	0.00	-0.02	.67	.49	.43	1184	1075.3	64.6	43.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40717.25	0.71	0.00	-0.02	.69	-17.48	-17.42	1192	1075.5	63.7	44.0
17.50	0.73	0.00	-0.02	.72	.46	.40	1202	1075.7	62.7	44.4
17.75	0.75	0.00	-0.02	.74	.45	.39	1208	1076.0	61.8	44.8
18.00	0.76	0.00	-0.02	.76	.44	.37	1213	1076.3	60.8	45.2
18.25	0.92	0.00	-0.01	.91	.36	.29	1251	1076.5	59.9	45.6
18.50	0.93	0.00	-0.01	.92	.36	.29	1255	1076.8	58.9	46.0
18.75	0.96	0.00	-0.01	.95	.35	.27	1262	1077.2	57.9	46.4
19.00	0.97	0.00	-0.01	.96	.34	.27	1266	1077.5	56.8	46.8
19.25	0.97	0.00	-0.01	.96	.35	.27	1266	1077.8	55.8	47.2
19.50	0.86	0.00	-0.01	.85	.40	.32	1240	1078.2	54.7	47.5
19.75	0.86	0.00	-0.01	.85	.40	.33	1240	1078.6	53.7	47.9
20.00	0.81	0.00	-0.01	.80	.43	.35	1228	1079.0	52.6	48.3
20.25	0.82	0.00	-0.01	.81	.43	.35	1231	1079.4	51.4	48.7
20.50	0.80	0.00	-0.01	.79	.44	.35	1227	1079.8	50.3	49.1
20.75	0.90	0.00	-0.01	.89	.39	.30	1253	1080.3	49.1	49.4
21.00	1.01	0.00	-0.01	1.01	.33	.24	1280	1080.7	47.9	49.8
21.25	1.06	0.00	-0.01	1.07	.31	.22	1293	1081.2	46.7	50.2
21.50	1.01	0.00	-0.01	1.01	.34	.25	1280	1081.7	45.5	50.5
21.75	0.83	0.00	-0.01	.83	.43	.34	1239	1082.2	44.2	50.9
22.00	0.84	0.00	0.00	.83	.43	.34	1239	1082.7	42.9	51.2
22.25	0.82	0.00	0.00	.82	.44	.35	1237	1083.3	41.5	51.6
22.50	0.89	0.00	0.00	.89	.40	.31	1254	1083.8	40.1	51.9
22.75	0.85	0.00	0.00	.85	.43	.33	1245	1084.4	38.7	52.3
23.00	0.93	0.00	0.00	.93	.39	.29	1264	1085.0	37.2	52.6
23.25	0.97	0.00	0.00	.97	.37	.27	1274	1085.6	35.7	53.0
23.50	0.86	0.00	0.00	.86	.43	.32	1250	1086.2	34.2	53.3
23.75	0.86	0.00	0.00	.86	.43	.33	1249	1086.8	32.6	53.6
24.00	0.84	0.00	0.00	.84	.45	.34	1243	1087.4	30.9	53.9
24.25	0.85	0.00	0.00	.86	.44	.33	1248	1088.0	29.2	54.3
24.50	0.85	0.00	0.00	.86	.44	.33	1248	1088.7	27.5	54.6
24.75	0.87	0.00	0.00	.88	.43	.33	1252	1089.4	25.7	54.9
25.00	0.86	0.00	0.00	.86	.45	.34	1247	1090.0	23.8	55.2
25.25	0.86	0.01	0.01	.87	.44	.34	1250	1090.8	21.9	55.4
25.50	0.86	0.02	0.01	.90	.43	.32	1257	1091.5	19.9	55.7
25.75	0.89	0.03	0.01	.92	.43	.31	1261	1092.2	17.9	56.0
26.00	0.88	0.04	0.01	.93	.43	.31	1264	1092.9	15.8	56.2
26.25	0.88	0.05	0.01	.94	.42	.31	1266	1093.7	13.6	56.5
26.50	0.86	0.06	0.01	.94	.43	.30	1266	1094.4	11.3	56.7
26.75	0.82	0.08	0.01	.91	.44	.32	1259	1095.2	9.0	56.9
27.00	0.77	0.08	0.01	.86	.47	.35	1247	1096.0	6.6	57.1
27.25	0.68	0.10	0.01	.79	.51	.39	1229	1096.8	4.1	57.3
27.50	0.64	0.11	0.01	.76	.53	.41	1221	1097.6	1.5	57.5
27.75	0.62	0.12	0.01	.75	.54	.42	1218	1098.4	358.8	57.7
28.00	0.60	0.13	0.01	.74	.55	.42	1215	1099.2	356.1	57.8
28.25	0.58	0.14	0.01	.74	.55	.43	1215	1100.0	353.3	57.9
28.50	0.58	0.15	0.01	.74	.55	.43	1216	1100.9	350.5	58.1
28.75	0.55	0.16	0.02	.73	.56	.44	1214	1101.7	347.6	58.1
29.00	0.55	0.17	0.02	.73	.56	.44	1214	1102.5	344.6	58.2
29.25	0.54	0.18	0.02	.73	.56	.44	1216	1103.4	341.5	58.3
29.50	0.52	0.18	0.02	.72	.57	.45	1213	1104.3	336.5	58.3
29.75	0.50	0.19	0.02	.71	.58	.46	1209	1105.1	335.4	58.3
30.00	0.46	0.20	0.02	.69	.60	.47	1202	1106.0	332.2	58.3
30.25	0.46	0.21	0.02	.69	.60	.47	1202	1106.9	329.1	58.2
30.50	0.44	0.22	0.02	.68	.61	.48	1200	1107.8	326.0	58.2
30.75	0.42	0.22	0.02	.66	.63	.49	1193	1108.7	322.8	58.1
31.00	0.40	0.23	0.02	.65	.63	.50	1191	1109.6	319.7	58.0
31.25	0.41	0.24	0.02	.67	.63	.49	1198	1110.5	316.6	57.9
31.50	0.40	0.24	0.02	.67	.63	.49	1197	1111.4	313.6	57.7
31.75	0.36	0.25	0.02	.64	.65	.51	1188	1112.3	310.6	57.6
32.00	0.36	0.26	0.02	.65	.64	.51	1195	1113.3	307.7	57.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log \rho_o$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40732.25	0.36	0.27	0.02	.65	-17.64	-17.51	1200	1114.2	304.8	57.2
32.50	0.37	0.27	0.03	.67	.63	.50	1209	1115.1	302.0	56.9
32.75	0.35	0.28	0.03	.66	.64	.50	1205	1116.0	299.3	56.7
33.00	0.36	0.29	0.03	.68	.63	.49	1211	1117.0	296.6	56.4
33.25	0.39	0.29	0.03	.71	.62	.48	1218	1117.9	294.0	56.1
33.50	0.41	0.30	0.03	.73	.61	.47	1221	1118.9	291.5	55.8
33.75	0.51	0.30	0.03	.64	.56	.41	1251	1119.8	289.1	55.5
34.00	0.68	0.31	0.03	1.02	.48	.32	1291	1120.8	286.7	55.2
34.25	1.04	0.32	0.03	1.38	.36	.19	1352	1121.7	284.4	54.9
40750.50	-0.20	0.41	0.05	.25	-18.23	-18.01	924	1180.1	210.8	24.1
50.75	-0.15	0.41	0.05	.30	.16	-17.94	969	1180.8	210.1	23.6
51.00	-0.14	0.40	0.05	.31	.14	.92	980	1181.5	209.4	23.2
51.25	-0.11	0.40	0.05	.34	.11	.88	1008	1182.1	208.7	22.7
51.50	-0.09	0.40	0.05	.36	.08	.86	1026	1182.8	208.0	22.2
51.75	-0.06	0.40	0.05	.39	.05	.83	1051	1183.4	207.3	21.7
52.00	-0.04	0.40	0.05	.41	.03	.81	1059	1184.0	206.6	21.2
52.25	0.00	0.39	0.05	.44	.01	.77	1074	1184.6	205.9	20.7
52.50	-0.02	0.39	0.05	.42	.03	.79	1058	1185.2	205.3	20.2
52.75	-0.02	0.39	0.05	.42	.03	.80	1059	1185.8	204.6	19.7
53.00	-0.02	0.39	0.05	.41	.05	.81	1052	1186.3	203.9	19.2
53.25	-0.02	0.39	0.05	.41	.05	.81	1050	1186.9	203.2	18.7
53.50	-0.02	0.39	0.04	.41	.05	.81	1052	1187.4	202.5	18.2
53.75	-0.02	0.39	0.04	.41	.04	.81	1054	1187.9	201.8	17.6
54.00	-0.05	0.38	0.04	.38	.08	.84	1031	1188.4	201.1	17.1
54.25	-0.05	0.38	0.04	.37	.09	.86	1027	1188.8	200.4	16.6
54.50	-0.07	0.38	0.04	.36	.10	.87	1017	1189.3	199.8	16.1
54.75	-0.04	0.38	0.04	.39	.07	.83	1035	1189.7	199.1	15.5
55.00	0.04	0.38	0.04	.46	.00	.76	1083	1190.1	198.4	15.0
55.25	0.09	0.37	0.04	.51	-17.95	.72	1116	1190.5	197.7	14.5
55.50	0.12	0.37	0.04	.53	.94	.70	1126	1190.8	197.1	13.9
55.75	0.15	0.37	0.04	.56	.92	.67	1137	1191.2	196.4	13.4
56.00	0.11	0.37	0.04	.52	.95	.71	1117	1191.5	195.7	12.9
56.25	0.06	0.36	0.04	.46	-18.00	.76	1087	1191.8	195.1	12.3
56.50	0.04	0.36	0.04	.44	.01	.78	1078	1192.1	194.4	11.8
56.75	0.03	0.36	0.04	.43	.01	.79	1075	1192.4	193.7	11.3
57.00	0.01	0.35	0.04	.41	.04	.82	1059	1192.6	193.1	10.7
57.25	0.01	0.35	0.04	.40	.05	.83	1046	1192.9	192.4	10.2
57.50	0.02	0.35	0.04	.41	.04	.81	1050	1193.1	191.7	9.6
57.75	0.03	0.34	0.04	.41	.04	.82	1052	1193.3	191.1	9.1
58.00	0.07	0.34	0.04	.45	.00	.77	1081	1193.5	190.4	8.6
58.25	0.10	0.34	0.04	.48	-17.98	.75	1097	1193.6	189.8	8.0
58.50	0.09	0.34	0.04	.47	.98	.76	1092	1193.8	189.1	7.5
58.75	0.05	0.33	0.04	.43	-18.01	.79	1070	1193.9	188.5	7.0
59.00	0.02	0.33	0.04	.39	.05	.84	1042	1194.0	187.8	6.4
59.25	0.02	0.32	0.04	.38	.06	.85	1036	1194.1	187.2	5.9
59.50	-0.01	0.32	0.04	.35	.09	.88	1014	1194.1	186.5	5.4
59.75	-0.02	0.32	0.04	.33	.12	.91	996	1194.1	185.9	4.8
60.00	-0.04	0.31	0.04	.32	.13	.92	986	1194.2	185.3	4.3
60.25	-0.05	0.31	0.04	.30	.16	.95	966	1194.1	184.6	3.8
60.50	-0.03	0.31	0.04	.31	.14	.93	976	1194.1	184.0	3.2
60.75	-0.03	0.30	0.04	.31	.14	.93	977	1194.0	183.3	2.7
61.00	-0.01	0.30	0.04	.33	.12	.90	994	1193.9	182.7	2.2
61.25	-0.01	0.30	0.04	.32	.13	.92	984	1193.8	182.1	1.6
61.50	-0.02	0.30	0.04	.31	.14	.93	976	1193.7	181.4	1.1
61.75	-0.02	0.29	0.04	.31	.14	.93	974	1193.6	180.8	0.6
62.00	0.00	0.29	0.04	.32	.13	.92	980	1193.4	180.2	0.1
62.25	0.00	0.29	0.04	.32	.13	.92	979	1193.2	179.5	-0.5
62.50	0.02	0.28	0.04	.34	.10	.89	998	1193.0	178.9	-1.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_n$	$\log p_0$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
46762.75	0.04	0.28	0.03	.35	-18.08	-17.67	1007	1192.8	178.3	-1.5
63.00	0.05	0.27	0.03	.35	.08	.87	1006	1192.6	177.7	-2.0
63.25	0.07	0.27	0.03	.37	.06	.85	1021	1192.3	177.0	-2.5
63.50	0.08	0.27	0.03	.38	.05	.84	1026	1192.0	176.4	-3.1
63.75	0.10	0.26	0.03	.40	.03	.82	1039	1191.8	175.8	-3.6
64.00	0.11	0.26	0.03	.41	.02	.81	1045	1191.4	175.2	-4.1
64.25	0.20	0.26	0.03	.49	-17.94	.73	1100	1191.1	174.6	-4.6
64.50	0.23	0.25	0.03	.51	.92	.71	1109	1190.8	173.9	-5.1
64.75	0.24	0.25	0.03	.53	.91	.69	1115	1190.4	173.3	-5.6
65.00	0.24	0.25	0.03	.52	.91	.70	1113	1190.0	172.7	-6.1
65.25	0.08	0.24	0.03	.36	-18.07	.86	1003	1189.6	172.1	-6.6
65.50	0.02	0.24	0.03	.29	.16	.95	941	1189.2	171.5	-7.1
65.75	0.04	0.24	0.03	.30	.14	.94	951	1188.8	170.8	-7.7
66.00	0.05	0.23	0.03	.31	.12	.92	961	1188.3	170.2	-8.2
66.25	0.06	0.23	0.03	.32	.11	.91	970	1187.8	169.6	-8.7
66.50	0.05	0.23	0.03	.31	.12	.92	960	1187.3	169.0	-9.2
66.75	0.06	0.22	0.03	.31	.12	.92	959	1186.8	168.4	-9.7
67.00	0.07	0.22	0.03	.32	.10	.90	966	1186.3	167.8	-10.2
67.25	0.08	0.22	0.03	.32	.10	.90	966	1185.8	167.2	-10.7
67.50	0.10	0.21	0.03	.34	.07	.88	983	1185.2	166.5	-11.2
67.75	0.10	0.21	0.03	.34	.07	.87	982	1184.7	165.9	-11.7
68.00	0.11	0.20	0.03	.34	.07	.87	983	1184.1	165.3	-12.3
68.25	0.11	0.20	0.03	.34	.07	.87	981	1183.5	164.7	-12.8
68.50	0.14	0.20	0.02	.36	.04	.85	996	1182.9	164.1	-13.3
68.75	0.13	0.19	0.02	.35	.05	.86	985	1182.3	163.5	-13.8
69.00	0.14	0.19	0.02	.35	.05	.86	985	1181.7	162.9	-14.3
69.25	0.17	0.18	0.02	.37	.02	.83	1002	1181.0	162.3	-14.8
69.50	0.17	0.18	0.02	.37	.02	.83	1000	1180.4	161.6	-15.3
69.75	0.18	0.17	0.02	.38	.01	.82	1006	1179.7	161.0	-15.8
70.00	0.20	0.17	0.02	.39	-17.99	.80	1017	1179.0	160.4	-16.4
70.25	0.19	0.17	0.02	.38	-18.00	.81	1008	1178.4	159.8	-16.9
70.50	0.21	0.16	0.02	.39	-17.99	.80	1012	1177.7	159.2	-17.4
70.75	0.23	0.16	0.02	.41	.97	.78	1027	1177.0	158.6	-17.9
71.00	0.30	0.15	0.02	.48	.89	.71	1076	1176.2	158.0	-18.4
71.25	0.27	0.15	0.02	.44	.94	.74	1043	1175.5	157.4	-18.9
71.50	0.26	0.15	0.02	.43	.94	.75	1033	1174.8	156.8	-19.4
71.75	0.26	0.14	0.02	.42	.95	.76	1033	1174.0	156.2	-19.9
72.00	0.24	0.14	0.02	.40	.96	.78	1022	1173.3	155.6	-20.4
72.25	0.21	0.14	0.02	.37	.99	.81	997	1172.5	154.9	-20.9
72.50	0.21	0.13	0.02	.36	-18.00	.82	986	1171.8	154.3	-21.5
72.75	0.20	0.13	0.02	.34	.02	.84	969	1171.0	153.7	-22.0
73.00	0.19	0.12	0.02	.33	.03	.85	961	1170.2	153.1	-22.5
73.25	0.19	0.12	0.02	.33	.03	.85	960	1169.4	152.5	-23.0
73.50	0.21	0.12	0.02	.34	.02	.83	967	1168.6	151.9	-23.5
73.75	0.21	0.11	0.02	.34	.01	.83	968	1167.8	151.3	-24.0
74.00	0.21	0.11	0.02	.33	.02	.84	964	1167.0	150.7	-24.5
74.25	0.22	0.11	0.02	.34	.00	.83	974	1166.2	150.1	-25.0
74.50	0.24	0.10	0.02	.35	-17.98	.81	982	1165.3	149.5	-25.5
74.75	0.25	0.10	0.01	.36	.97	.80	990	1164.5	148.9	-26.0
75.00	0.24	0.09	0.01	.35	.98	.81	982	1163.7	148.3	-26.5
75.25	0.25	0.09	0.01	.36	.96	.79	990	1162.8	147.7	-27.0
75.50	0.26	0.09	0.01	.36	.95	.79	991	1162.0	147.0	-27.5
75.75	0.26	0.08	0.01	.35	.96	.80	983	1161.2	146.4	-28.0
76.00	0.26	0.08	0.01	.35	.96	.80	982	1160.3	145.8	-28.5
76.25	0.29	0.07	0.01	.37	.93	.77	995	1159.5	145.2	-29.0
76.50	0.32	0.07	0.01	.40	.90	.73	1013	1158.6	144.6	-29.5
76.75	0.40	0.07	0.01	.48	.82	.65	1067	1157.7	144.0	-30.0
77.00	0.35	0.06	0.01	.43	.86	.69	1030	1156.9	143.4	-30.5
77.25	0.37	0.06	0.01	.44	.85	.68	1043	1156.0	142.8	-31.0
77.50	0.31	0.06	0.01	.38	.90	.75	1005	1155.1	142.2	-31.5

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log P_e$	$\log P_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40777.75	0.29	0.05	0.01	.35	-17.93	-17.78	982	1154.3	141.6	-32.0
78.00	0.27	0.05	0.01	.33	.95	.80	962	1153.4	141.0	-32.5
78.25	0.26	0.05	0.01	.31	.98	.83	946	1152.5	140.4	-33.0
78.50	0.27	0.04	0.01	.32	.96	.81	958	1151.6	139.7	-33.5
78.75	0.25	0.04	0.01	.30	.98	.83	940	1150.8	139.1	-34.0
79.00	0.24	0.04	0.01	.29	.99	.85	930	1149.9	138.5	-34.5
79.25	0.25	0.03	0.01	.29	.99	.84	929	1149.0	137.9	-35.0
79.50	0.25	0.03	0.01	.29	.98	.84	929	1148.1	137.3	-35.5
79.75	0.26	0.03	0.01	.29	.98	.84	930	1147.2	136.7	-36.0
80.00	0.25	0.02	0.01	.28	.99	.85	920	1146.4	136.1	-36.6
80.25	0.25	0.02	0.01	.27	-18.00	.86	909	1145.5	135.5	-37.1
80.50	0.24	0.01	0.01	.26	.01	.88	901	1144.6	134.9	-37.6
80.75	0.26	0.01	0.01	.28	-17.98	.84	922	1143.7	134.2	-38.1
81.00	0.26	0.01	0.01	.28	.97	.84	922	1142.8	133.6	-38.5
81.25	0.25	0.01	0.01	.26	-18.00	.87	901	1142.0	133.0	-39.0
81.50	0.24	0.00	0.01	.25	.01	.88	891	1141.1	132.4	-39.5
81.75	0.26	0.00	0.01	.26	-17.99	.86	903	1140.2	131.8	-40.0
82.00	0.26	0.00	0.01	.26	.99	.86	903	1139.3	131.2	-40.5
82.25	0.26	0.00	0.00	.26	.99	.85	903	1138.5	130.5	-41.0
82.50	0.27	-0.01	0.00	.27	.96	.84	914	1137.6	129.9	-41.5
82.75	0.28	-0.01	0.00	.27	.96	.83	914	1136.7	129.3	-42.0
83.00	0.26	-0.01	0.00	.27	.96	.83	915	1135.9	128.7	-42.5
83.25	0.29	-0.01	0.00	.29	.92	.80	934	1135.0	128.1	-43.0
83.50	0.26	-0.01	0.00	.27	.95	.82	915	1134.2	127.5	-43.5
83.75	0.28	-0.02	0.00	.27	.94	.82	915	1133.3	126.8	-44.0
84.00	0.28	-0.02	0.00	.26	.96	.83	905	1132.5	126.2	-44.5
84.25	0.26	-0.02	0.00	.26	.95	.83	906	1131.6	125.6	-45.0
84.50	0.28	-0.02	0.00	.26	.95	.83	906	1130.8	125.0	-45.5
84.75	0.30	-0.02	0.00	.28	.91	.79	926	1130.0	124.3	-46.0
85.00	0.28	-0.03	0.00	.26	.94	.82	905	1129.1	123.7	-46.5
85.25	0.30	-0.03	0.00	.27	.92	.80	915	1128.3	123.1	-47.0
85.50	0.29	-0.03	0.00	.26	.93	.82	906	1127.5	122.5	-47.4
85.75	0.30	-0.03	0.00	.27	.91	.80	917	1126.7	121.8	-47.9
86.00	0.31	-0.03	0.00	.28	.89	.78	927	1125.9	121.2	-48.4
86.25	0.32	-0.03	0.00	.29	.87	.76	937	1125.1	120.6	-48.9
86.50	0.33	-0.03	0.00	.29	.87	.76	938	1124.3	119.9	-49.4
86.75	0.31	-0.03	0.00	.28	.88	.77	929	1123.5	119.3	-49.9
87.00	0.32	-0.03	0.00	.29	.86	.75	938	1122.7	118.7	-50.4
87.25	0.33	-0.03	0.00	.29	.86	.75	938	1121.9	118.0	-50.9
87.50	0.33	-0.03	0.00	.30	.84	.73	949	1121.2	117.4	-51.3
87.75	0.33	-0.03	0.00	.30	.83	.73	949	1120.4	116.8	-51.8
88.00	0.35	-0.03	0.00	.32	.80	.70	967	1119.7	116.1	-52.3
88.25	0.34	-0.03	0.00	.31	.81	.71	956	1118.9	115.5	-52.8
88.50	0.36	-0.03	0.00	.34	.77	.67	982	1118.2	114.8	-53.3
88.75	0.39	-0.02	0.00	.36	.74	.64	997	1117.5	114.2	-53.7
89.00	0.38	-0.02	0.00	.36	.74	.64	996	1116.8	113.5	-54.2
89.25	0.38	-0.02	0.00	.36	.74	.64	999	1116.1	112.9	-54.7
89.50	0.37	-0.01	0.00	.35	.74	.65	992	1115.4	112.2	-55.2
89.75	0.36	-0.01	0.00	.35	.74	.64	993	1114.7	111.6	-55.7
90.00	0.38	0.00	0.00	.38	.70	.60	1019	1114.0	110.9	-56.1
90.25	0.38	0.00	0.00	.38	.70	.60	1017	1113.3	110.3	-56.6
90.50	0.38	0.00	0.00	.38	.69	.60	1018	1112.7	109.6	-57.1
90.75	0.38	0.00	0.00	.38	.69	.60	1019	1112.0	109.0	-57.6
91.00	0.39	0.00	0.00	.38	.69	.59	1020	1111.4	108.3	-58.1
91.25	0.39	0.00	0.00	.39	.67	.58	1027	1110.8	107.6	-58.5
91.50	0.39	0.00	0.00	.39	.67	.58	1025	1110.2	107.0	-59.0
91.75	0.40	0.00	0.00	.40	.66	.57	1033	1109.6	106.3	-59.5
92.00	0.41	0.00	0.00	.40	.66	.57	1032	1109.0	105.6	-60.0
92.25	0.50	0.00	0.00	.50	.56	.47	1098	1108.4	105.0	-60.4
92.50	0.61	0.00	0.00	.61	.48	.38	1155	1107.8	104.3	-60.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_a$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40792.75	0.53	0.00	0.00	.52	-17.54	-17.45	1108	1107.3	103.6	-61.4
93.00	0.50	0.00	0.00	.50	.55	.46	1101	1106.7	102.9	-61.8
93.25	0.47	0.00	0.00	.47	.58	.49	1082	1106.2	102.2	-62.3
93.50	0.46	0.00	0.00	.45	.59	.50	1069	1105.7	101.6	-62.8
93.75	0.46	0.00	0.00	.45	.58	.50	1073	1105.2	100.9	-63.2
94.00	0.45	0.00	0.00	.45	.58	.49	1075	1104.7	100.2	-63.7
94.25	0.44	0.00	0.00	.44	.58	.50	1068	1104.3	99.5	-64.2
94.50	0.40	0.00	0.00	.40	.62	.54	1038	1103.8	98.8	-64.7
94.75	0.41	0.00	0.00	.40	.62	.54	1037	1103.4	98.1	-65.1
95.00	0.40	0.00	-0.01	.39	.63	.55	1029	1102.9	97.4	-65.6
95.25	0.39	0.00	-0.01	.38	.64	.56	1024	1102.5	96.6	-66.0
95.50	0.37	0.00	-0.01	.36	.66	.58	1011	1102.2	95.9	-66.5
95.75	0.36	0.00	-0.01	.37	.64	.56	1020	1101.8	95.2	-67.0
96.00	0.53	0.00	-0.01	.53	.48	.40	1132	1101.4	94.5	-67.4
96.25	0.55	0.00	-0.01	.54	.48	.40	1135	1101.1	93.7	-67.9
96.50	0.68	0.00	-0.01	.67	.39	.31	1197	1100.8	93.0	-68.3
96.75	0.61	0.00	-0.01	.60	.44	.35	1160	1100.5	92.3	-68.8
97.00	0.47	0.00	-0.01	.46	.55	.47	1078	1100.2	91.5	-69.3
97.25	0.45	0.00	-0.01	.45	.55	.47	1078	1099.9	90.8	-69.7
97.50	0.43	0.00	-0.01	.43	.56	.49	1067	1099.6	90.0	-70.2
97.75	0.40	0.00	-0.01	.39	.60	.53	1037	1099.4	89.3	-70.6
98.00	0.40	0.00	-0.01	.39	.60	.52	1038	1099.1	88.5	-71.1
98.25	0.38	0.00	-0.01	.38	.61	.54	1028	1098.9	87.7	-71.5
98.50	0.42	0.00	-0.01	.41	.58	.50	1051	1098.7	86.9	-72.0
98.75	0.42	0.00	-0.01	.42	.56	.49	1060	1098.5	86.1	-72.4
99.00	0.42	0.00	-0.01	.41	.57	.50	1052	1098.4	85.3	-72.9
99.25	0.43	0.00	-0.01	.42	.56	.49	1060	1098.2	84.5	-73.3
99.50	0.41	0.00	0.00	.41	.56	.49	1056	1098.1	83.7	-73.8
99.75	0.40	0.00	0.00	.40	.57	.50	1050	1098.0	82.9	-74.2
40800.00	0.41	0.00	0.00	.40	.57	.50	1050	1097.9	82.1	-74.7
00.25	0.40	0.00	0.00	.40	.57	.50	1049	1097.8	81.3	-75.1
00.50	0.40	0.00	0.00	.39	.58	.51	1040	1097.8	80.4	-75.5
00.75	0.37	0.00	0.00	.37	.60	.53	1026	1097.7	79.5	-76.0
01.00	0.37	0.00	0.00	.37	.60	.53	1026	1097.7	78.7	-76.4
40801.50	0.37	0.00	0.00	.37	-17.60	-17.53	1026	1097.7	76.9	-77.3
02.00	0.37	0.00	0.00	.37	.60	.53	1026	1097.8	75.1	-78.1
02.50	0.37	0.00	0.00	.37	.60	.52	1027	1097.9	73.2	-79.0
03.00	0.37	0.00	0.00	.37	.60	.52	1026	1098.1	71.3	-79.8
03.50	0.37	0.00	0.00	.37	.60	.52	1026	1098.4	69.3	-80.7
04.00	0.36	0.00	0.00	.37	.60	.52	1025	1098.7	67.3	-81.5
04.50	0.26	0.00	0.00	.37	.60	.52	1024	1099.0	65.1	-82.3
05.00	0.37	0.00	0.01	.38	.59	.51	1030	1099.4	62.9	-83.2
05.50	0.39	0.00	0.01	.40	.57	.49	1045	1099.9	60.6	-84.0
06.00	0.40	0.00	0.01	.40	.57	.49	1043	1100.4	58.1	-84.7
06.50	0.39	0.00	0.01	.40	.57	.50	1040	1100.9	55.6	-85.5
07.00	0.38	0.00	0.01	.40	.58	.50	1038	1101.5	52.9	-86.3
07.50	0.38	0.00	0.01	.39	.59	.51	1031	1102.2	50.0	-87.0
08.00	0.36	0.00	0.01	.37	.61	.53	1016	1102.9	47.0	-87.7
08.50	0.35	0.00	0.01	.36	.62	.54	1007	1103.6	43.8	-88.4
09.00	0.37	0.00	0.02	.38	.60	.52	1023	1104.4	40.3	-89.1
09.50	0.37	0.00	0.02	.36	.61	.52	1022	1105.2	36.7	-89.7
10.00	0.37	0.00	0.02	.39	.60	.51	1028	1106.0	32.7	-90.3
10.50	0.37	0.00	0.02	.39	.60	.52	1028	1106.8	28.5	-90.8
11.00	0.37	0.00	0.02	.39	.60	.52	1027	1107.7	24.0	-91.3
11.50	0.37	0.00	0.02	.39	.61	.52	1026	1108.6	19.1	-91.7
40812.00	0.37	0.00	0.02	.39	-17.61	-17.52	1024	1109.6	13.8	-92.1
12.25	0.36	0.00	0.02	.38	.62	.54	1015	1110.0	11.1	-92.3
12.50	0.35	0.00	0.02	.37	.64	.55	1008	1110.5	8.3	-92.4

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40812.75	0.37	0.00	0.02	.39	-17.62	-17.53	1023	1111.0	5.4	-92.5
13.00	0.38	0.00	0.02	.40	.61	.52	1030	1111.5	2.4	-92.6
13.25	0.36	0.00	0.02	.38	.63	.54	1012	1112.0	359.4	-92.7
13.50	0.36	0.00	0.02	.38	.64	.54	1012	1112.6	356.3	-92.8
13.75	0.37	0.00	0.02	.39	.63	.53	1019	1113.1	353.1	-92.8
14.00	0.37	0.00	0.02	.39	.63	.54	1017	1113.6	349.9	-92.8
14.25	0.38	0.00	0.02	.40	.62	.53	1023	1114.1	346.7	-92.8
14.50	0.39	0.00	0.02	.42	.60	.51	1039	1114.7	343.4	-92.7
14.75	0.44	0.00	0.02	.46	.57	.47	1067	1115.2	340.2	-92.7
15.00	0.57	0.00	0.02	.60	.46	.36	1150	1115.8	336.9	-92.6
15.25	0.81	0.00	0.02	.83	.33	.22	1245	1116.4	333.6	-92.4
15.50	0.87	0.00	0.02	.89	.31	.19	1258	1116.9	330.4	-92.3
15.75	0.64	0.00	0.02	.66	.44	.32	1165	1117.5	327.2	-92.1
16.00	0.43	0.00	0.02	.45	.60	.49	1045	1118.1	324.1	-91.9
16.25	0.37	0.00	0.02	.39	.66	.55	1002	1118.7	321.0	-91.7
16.50	0.37	0.00	0.02	.39	.66	.55	1005	1119.3	318.0	-91.4
16.75	0.44	0.00	0.02	.47	.58	.47	1063	1119.9	315.0	-91.2
17.00	0.45	0.00	0.02	.47	.58	.48	1062	1120.5	312.2	-90.9
17.25	0.42	0.00	0.02	.44	.61	.51	1042	1121.1	309.4	-90.6
17.50	0.40	0.00	0.02	.43	.62	.52	1036	1121.7	306.7	-90.3
17.75	0.41	0.00	0.02	.43	.63	.52	1036	1122.3	304.1	-89.9
18.00	0.39	0.00	0.02	.42	.64	.53	1028	1122.9	301.6	-89.6
18.25	0.40	0.00	0.03	.42	.64	.53	1028	1123.6	299.1	-89.2
18.50	0.40	0.00	0.03	.43	.64	.52	1034	1124.2	296.8	-88.8
18.75	0.40	0.00	0.03	.42	.65	.54	1026	1124.9	294.5	-88.4
19.00	0.41	0.00	0.03	.44	.63	.52	1040	1125.5	292.3	-88.0
19.25	0.40	0.00	0.03	.43	.64	.53	1032	1126.2	290.2	-87.5
19.50	0.42	0.00	0.03	.44	.64	.52	1038	1126.8	288.1	-87.1
19.75	0.41	0.00	0.03	.44	.64	.52	1037	1127.5	286.2	-86.6
20.00	0.41	0.00	0.03	.44	.64	.53	1036	1128.2	284.3	-86.2
20.25	0.43	0.00	0.03	.46	.63	.51	1048	1128.9	282.4	-85.7
20.50	0.42	0.00	0.03	.45	.64	.52	1040	1129.5	280.7	-85.2
20.75	0.42	0.00	0.03	.45	.64	.52	1040	1130.2	278.9	-84.7
21.00	0.43	0.00	0.03	.45	.65	.53	1039	1130.9	277.3	-84.2
21.25	0.44	0.00	0.03	.47	.63	.51	1051	1131.6	275.7	-83.7
21.50	0.43	0.00	0.03	.46	.64	.52	1044	1132.4	274.1	-83.2
21.75	0.40	0.01	0.03	.44	.67	.54	1029	1133.1	272.6	-82.7
22.00	0.35	0.05	0.03	.43	.68	.55	1021	1133.8	271.1	-82.2
22.25	0.31	0.08	0.03	.42	.69	.57	1013	1134.5	269.7	-81.6
22.50	0.28	0.11	0.03	.42	.70	.57	1011	1135.2	268.3	-81.1
22.75	0.25	0.13	0.03	.41	.71	.58	1003	1136.0	267.0	-80.6
23.00	0.26	0.14	0.03	.44	.69	.56	1023	1136.7	265.7	-80.0
23.25	0.25	0.16	0.03	.44	.69	.56	1023	1137.4	264.4	-79.5
23.50	0.25	0.17	0.03	.45	.68	.55	1029	1138.2	263.2	-78.9
23.75	0.23	0.18	0.03	.44	.69	.56	1022	1138.9	262.0	-78.4
24.00	0.24	0.19	0.03	.46	.68	.54	1035	1139.6	260.8	-77.8
24.25	0.24	0.20	0.03	.47	.67	.54	1040	1140.4	259.6	-77.3
24.50	0.22	0.20	0.03	.46	.68	.55	1033	1141.1	258.5	-76.7
24.75	0.22	0.21	0.03	.46	.69	.55	1033	1141.9	257.4	-76.1
25.00	0.20	0.22	0.03	.45	.70	.56	1025	1142.6	256.3	-75.6
25.25	0.20	0.22	0.03	.46	.69	.55	1031	1143.4	255.3	-75.0
25.50	0.16	0.23	0.04	.44	.72	.57	1016	1144.1	254.2	-74.4
25.75	0.16	0.23	0.04	.43	.73	.59	1008	1144.9	253.2	-73.8
26.00	0.16	0.24	0.04	.43	.73	.59	1008	1145.7	252.2	-73.3
26.25	0.15	0.24	0.04	.43	.74	.59	1007	1146.4	251.2	-72.7
26.50	0.15	0.25	0.04	.43	.74	.59	1006	1147.2	250.3	-72.1
26.75	0.14	0.25	0.04	.43	.74	.59	1005	1148.0	249.3	-71.5
27.00	0.15	0.25	0.04	.44	.73	.59	1012	1148.7	248.4	-70.9
27.25	0.13	0.26	0.04	.43	.75	.60	1005	1149.5	247.5	-70.3
27.50	0.14	0.26	0.04	.44	.74	.59	1011	1150.3	246.5	-69.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40627.75	0.13	0.26	0.04	.43	-17.75	-17.60	1003	1151.0	245.7	-69.2
26.00	0.13	0.26	0.04	.43	.76	.61	1001	1151.8	244.8	-68.6
28.25	0.13	0.26	0.04	.44	.75	.60	1007	1152.5	243.9	-68.0
28.50	0.14	0.26	0.04	.45	.75	.59	1014	1153.3	243.0	-67.4
28.75	0.15	0.27	0.04	.46	.74	.58	1018	1154.0	242.2	-66.8
29.00	0.14	0.27	0.04	.45	.76	.60	1010	1154.7	241.4	-66.2
29.25	0.14	0.27	0.04	.45	.76	.60	1010	1155.5	240.5	-65.6
29.50	0.14	0.27	0.04	.45	.76	.60	1012	1156.2	239.7	-65.0
29.75	0.14	0.27	0.04	.45	.76	.60	1012	1156.9	238.9	-64.4
30.00	0.15	0.27	0.04	.46	.75	.59	1018	1157.6	238.1	-63.8
30.25	0.15	0.27	0.04	.47	.75	.58	1023	1158.4	237.3	-63.2
30.50	0.15	0.27	0.04	.47	.75	.58	1023	1159.1	236.5	-62.6
30.75	0.15	0.27	0.04	.47	.75	.58	1023	1159.8	235.8	-62.0
31.00	0.17	0.27	0.04	.48	.74	.57	1029	1160.5	235.0	-61.3
31.25	0.15	0.27	0.04	.46	.76	.59	1016	1161.2	234.2	-60.7
31.50	0.15	0.27	0.04	.46	.77	.60	1015	1161.9	233.5	-60.1
31.75	0.15	0.27	0.04	.46	.77	.60	1015	1162.5	232.7	-59.5
32.00	0.13	0.27	0.04	.44	.79	.62	1001	1163.2	232.0	-58.9
32.25	0.15	0.27	0.04	.46	.77	.60	1013	1163.9	231.2	-58.3
32.50	0.15	0.27	0.04	.47	.77	.59	1019	1164.5	230.5	-57.7
32.75	0.14	0.27	0.04	.46	.78	.60	1013	1165.1	229.8	-57.1
33.00	0.13	0.27	0.04	.45	.79	.61	1006	1165.7	229.1	-56.4
33.25	0.13	0.27	0.04	.45	.79	.62	1005	1166.3	228.4	-55.8
33.50	0.12	0.27	0.04	.44	.80	.63	998	1166.9	227.7	-55.2
33.75	0.13	0.27	0.04	.44	.81	.63	998	1167.5	226.9	-54.6
34.00	0.12	0.27	0.04	.43	.82	.64	991	1168.0	226.2	-54.0
34.25	0.13	0.27	0.04	.44	.81	.63	997	1168.5	225.6	-53.4
34.50	0.11	0.27	0.04	.42	.84	.65	982	1169.1	224.9	-52.7
34.75	0.11	0.26	0.04	.41	.85	.67	975	1169.6	224.2	-52.1
35.00	0.09	0.26	0.04	.39	.87	.69	961	1170.0	223.5	-51.5
35.25	0.09	0.26	0.04	.40	.86	.68	967	1170.5	222.8	-50.9
35.50	0.09	0.26	0.04	.39	.88	.69	959	1170.9	222.1	-50.3
35.75	0.09	0.26	0.04	.39	.88	.69	958	1171.3	221.5	-49.6
36.00	0.09	0.26	0.04	.39	.88	.69	959	1171.7	220.8	-49.0
36.25	0.10	0.26	0.04	.39	.88	.69	959	1172.1	220.1	-48.4
36.50	0.11	0.25	0.04	.40	.87	.69	964	1172.5	219.5	-47.8
36.75	0.09	0.25	0.04	.39	.89	.70	957	1172.8	218.8	-47.1
37.00	0.10	0.25	0.04	.39	.88	.70	958	1173.1	218.2	-46.5
37.25	0.11	0.25	0.04	.40	.88	.69	964	1173.4	217.5	-45.9
37.50	0.13	0.24	0.04	.42	.86	.67	977	1173.6	216.9	-45.3
37.75	0.12	0.24	0.04	.41	.87	.68	971	1173.9	216.2	-44.6
38.00	0.13	0.24	0.04	.41	.87	.68	971	1174.1	215.6	-44.0
38.25	0.13	0.24	0.04	.41	.87	.68	969	1174.2	214.9	-43.4
38.50	0.11	0.24	0.04	.39	.90	.70	954	1174.4	214.3	-42.8
38.75	0.10	0.24	0.04	.37	.92	.73	940	1174.5	213.6	-42.1
39.00	0.07	0.23	0.04	.35	.94	.75	926	1174.6	213.0	-41.5
39.25	0.05	0.23	0.04	.32	.98	.79	902	1174.7	212.4	-40.9
40678.25	0.79	-0.19	-0.02	.58	-17.48	-17.41	982	1089.2	118.2	57.0
78.50	0.79	-0.19	-0.02	.58	.48	.41	981	1088.7	117.5	57.6
78.75	0.78	-0.19	-0.02	.58	.47	.41	982	1088.1	116.8	58.2
79.00	0.77	-0.18	-0.02	.57	.48	.41	978	1087.5	116.1	58.8
79.25	0.76	-0.18	-0.02	.57	.47	.41	977	1087.0	115.4	59.4
79.50	0.76	-0.17	-0.02	.57	.47	.41	976	1086.5	114.7	60.0
79.75	0.74	-0.17	-0.02	.56	.48	.41	971	1085.9	113.9	60.6
80.00	0.74	-0.16	-0.02	.56	.47	.41	973	1085.4	113.2	61.2
80.25	0.72	-0.16	-0.02	.55	.48	.42	968	1084.9	112.5	61.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40880.50	0.72	-0.15	-0.02	.55	-17.47	-17.41	968	1084.3	111.7	62.4
80.75	0.72	-0.14	-0.02	.56	.46	.40	973	1083.8	111.0	63.0
81.00	0.75	-0.13	-0.02	.61	.42	.36	997	1083.3	110.2	63.6
81.25	0.81	-0.12	-0.02	.67	.38	.32	1023	1082.8	109.5	64.1
81.50	0.82	-0.11	-0.02	.69	.37	.31	1029	1082.3	108.7	64.7
81.75	0.84	-0.10	-0.02	.72	.35	.29	1041	1081.8	107.9	65.3
82.00	0.87	-0.08	-0.02	.77	.32	.26	1059	1081.3	107.1	65.9
82.25	0.88	-0.07	-0.02	.79	.31	.25	1064	1080.9	106.3	66.5
82.50	0.85	-0.05	-0.02	.78	.31	.25	1061	1080.4	105.5	67.1
82.75	0.84	-0.03	-0.02	.79	.30	.25	1065	1079.9	104.7	67.6
83.00	0.70	-0.01	-0.02	.67	.37	.32	1013	1079.5	103.9	68.2
83.25	0.61	0.00	-0.02	.59	.42	.37	974	1079.1	103.1	68.8
83.50	0.60	0.00	-0.02	.58	.43	.37	969	1078.6	102.3	69.4
83.75	0.61	0.00	-0.02	.59	.42	.36	975	1078.2	101.4	70.0
84.00	0.62	0.00	-0.02	.60	.40	.35	983	1077.8	100.6	70.5
84.25	0.64	0.00	-0.02	.62	.39	.34	992	1077.4	99.7	71.1
84.50	0.63	0.00	-0.02	.61	.39	.34	986	1077.0	98.8	71.7
84.75	0.62	0.00	-0.02	.60	.40	.35	980	1076.7	98.0	72.3
85.00	0.62	0.00	-0.02	.60	.40	.35	980	1076.3	97.1	72.8
85.25	0.63	0.00	-0.02	.61	.39	.34	985	1076.0	96.1	73.4
85.50	0.64	0.00	-0.02	.62	.38	.33	989	1075.7	95.2	74.0
85.75	0.64	0.00	-0.02	.62	.37	.33	990	1075.4	94.3	74.5
86.00	0.66	0.00	-0.02	.64	.36	.31	999	1075.1	93.3	75.1
86.25	0.68	0.00	-0.02	.66	.34	.30	1007	1074.9	92.4	75.7
86.50	0.71	0.00	-0.02	.69	.32	.28	1019	1074.6	91.4	76.2
86.75	0.75	0.00	-0.02	.73	.30	.25	1035	1074.4	90.4	76.8
87.00	0.77	0.00	-0.02	.75	.29	.24	1041	1074.2	89.4	77.3
87.25	0.86	0.00	-0.02	.84	.24	.19	1072	1073.9	88.3	77.9
87.50	0.90	0.00	-0.02	.88	.22	.17	1085	1073.8	87.3	78.4
87.75	0.93	0.00	-0.02	.91	.20	.16	1096	1073.6	86.2	79.0
88.00	0.94	0.00	-0.02	.92	.20	.15	1097	1073.4	85.1	79.5
88.25	0.96	0.00	-0.02	.94	.19	.14	1103	1073.2	84.0	80.1
88.50	0.93	0.00	-0.02	.91	.20	.15	1094	1073.1	82.9	80.6
88.75	0.93	0.00	-0.02	.91	.20	.15	1093	1073.0	81.7	81.1
89.00	0.97	0.00	-0.02	.95	.18	.14	1103	1072.8	80.5	81.7
89.25	1.02	0.00	-0.02	1.00	.16	.11	1118	1072.7	79.3	82.2
89.50	0.91	0.00	-0.02	.89	.21	.16	1083	1072.6	78.0	82.7
89.75	0.90	0.00	-0.02	.88	.21	.17	1061	1072.6	76.7	83.2
90.00	0.89	0.00	-0.02	.87	.21	.17	1078	1072.5	75.4	83.8
90.25	0.85	0.00	-0.02	.83	.23	.19	1064	1072.5	74.1	84.3
90.50	0.81	0.00	-0.02	.79	.25	.21	1047	1072.4	72.7	84.8
90.75	0.79	0.00	-0.02	.78	.25	.21	1042	1072.4	71.3	85.3
91.00	0.82	0.00	-0.02	.80	.24	.20	1050	1072.4	69.8	85.8
91.25	0.84	0.00	-0.02	.83	.22	.18	1062	1072.5	68.3	86.3
91.50	0.86	0.00	-0.02	.84	.22	.18	1065	1072.5	66.7	86.8
91.75	0.88	0.00	-0.02	.86	.21	.17	1071	1072.5	65.1	87.2
92.00	0.89	0.00	-0.02	.87	.20	.16	1075	1072.6	63.5	87.7
92.25	0.88	0.00	-0.02	.86	.21	.17	1071	1072.6	61.8	88.2
92.50	0.86	0.00	-0.02	.85	.21	.17	1065	1072.7	60.0	88.6
92.75	0.88	0.00	-0.02	.86	.21	.17	1066	1072.8	58.2	89.1
93.00	0.88	0.00	-0.02	.86	.21	.17	1066	1072.9	56.3	89.5
93.25	0.89	0.00	-0.02	.87	.20	.16	1068	1073.0	54.4	90.0
93.50	0.88	0.00	-0.02	.87	.20	.16	1066	1073.1	52.4	90.4
93.75	0.89	0.00	-0.01	.88	.20	.16	1070	1073.2	50.3	90.8
94.00	0.89	0.00	-0.01	.88	.20	.16	1068	1073.3	48.1	91.2
94.25	0.88	0.00	-0.01	.87	.21	.16	1063	1073.4	45.9	91.6
94.50	0.89	0.00	-0.01	.88	.20	.16	1066	1073.6	43.6	91.9
94.75	0.89	0.00	-0.01	.88	.20	.16	1067	1073.7	41.2	92.3
95.00	0.90	0.00	-0.01	.89	.19	.15	1070	1073.9	38.7	92.7
95.25	0.91	0.00	-0.01	.90	.19	.15	1071	1074.0	36.2	93.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40895.50	0.91	0.00	-0.01	.89	-17.20	-17.15	1067	1074.2	33.6	93.3
95.75	0.92	0.00	-0.01	.91	.19	.14	1073	1074.3	30.9	93.5
96.00	0.93	0.00	-0.01	.92	.18	.14	1075	1074.5	28.1	93.9
96.25	0.91	0.00	-0.01	.91	.19	.15	1070	1074.7	25.2	94.1
96.50	0.92	0.00	-0.01	.91	.19	.15	1069	1074.9	22.3	94.4
96.75	0.91	0.00	-0.01	.91	.19	.15	1068	1075.0	19.3	94.6
97.00	0.92	0.00	-0.01	.91	.19	.15	1069	1075.2	16.2	94.8
97.25	1.12	0.00	0.00	1.11	.11	.06	1128	1075.4	13.1	95.0
97.50	1.43	0.00	0.00	1.43	.01	-16.96	1201	1075.6	10.0	95.1
97.75	1.32	0.00	0.00	1.31	.04	-17.00	1174	1075.8	6.8	95.2
98.00	0.99	0.00	0.00	.99	.16	.11	1083	1076.0	3.6	95.3
98.25	0.84	0.00	0.00	.84	.23	.18	1037	1076.3	0.4	95.4
98.50	0.67	0.00	0.00	.67	.33	.28	969	1076.5	357.2	95.5
98.75	0.61	0.00	0.00	.61	.37	.32	943	1076.7	354.1	95.5
99.00	0.63	0.00	0.00	.63	.35	.31	952	1076.9	350.9	95.5
99.25	0.67	0.00	0.00	.67	.33	.28	969	1077.2	347.8	95.5
99.50	0.70	0.00	0.00	.71	.30	.26	985	1077.4	344.7	95.4
99.75	0.75	0.00	0.00	.75	.28	.23	1000	1077.7	341.7	95.4
40900.00	0.82	0.00	0.00	.83	.24	.19	1030	1077.9	338.7	95.3
00.25	0.84	0.00	0.00	.85	.23	.18	1036	1078.1	335.8	95.2
00.50	0.85	0.00	0.01	.85	.23	.18	1035	1078.4	333.0	95.1
00.75	0.84	0.00	0.01	.85	.23	.19	1033	1078.6	330.3	94.9
01.00	0.84	0.00	0.01	.85	.24	.19	1032	1078.9	327.6	94.8
01.25	0.84	0.00	0.01	.85	.24	.19	1032	1079.1	325.0	94.6
01.50	0.84	0.00	0.01	.85	.24	.19	1030	1079.4	322.5	94.4
01.75	0.81	0.00	0.01	.81	.26	.21	1015	1079.7	320.1	94.2
02.00	0.78	0.00	0.01	.79	.27	.22	1006	1079.9	317.7	93.9
02.25	0.77	0.00	0.01	.78	.28	.23	1002	1080.2	315.5	93.7
02.50	0.75	0.00	0.01	.76	.29	.24	994	1080.5	313.3	93.4
02.75	0.76	0.00	0.01	.77	.29	.24	996	1080.8	311.1	93.2
03.00	0.77	0.00	0.01	.78	.28	.23	1001	1081.1	309.1	92.9
03.25	0.75	0.00	0.01	.76	.30	.24	993	1081.4	307.1	92.6
03.50	0.77	0.00	0.01	.79	.28	.23	1003	1081.7	305.2	92.3
03.75	0.76	0.00	0.01	.77	.30	.24	994	1082.0	303.3	92.0
04.00	0.78	0.00	0.01	.79	.29	.23	1001	1082.3	301.6	91.7
04.25	0.77	0.00	0.01	.78	.30	.24	996	1082.6	299.8	91.4
04.50	0.77	0.00	0.01	.79	.29	.24	999	1082.9	298.1	91.1
04.75	0.77	0.00	0.01	.79	.29	.24	998	1083.2	296.5	90.7
05.00	0.75	0.00	0.01	.76	.31	.26	986	1083.5	294.9	90.4
05.25	0.75	0.00	0.01	.77	.31	.25	990	1083.9	293.4	90.1
05.50	0.74	0.00	0.01	.76	.32	.26	985	1084.2	291.9	89.7
05.75	0.75	0.00	0.01	.76	.32	.26	984	1084.5	290.4	89.3
06.00	0.75	0.00	0.01	.77	.32	.26	987	1084.9	289.0	89.0
06.25	0.74	0.00	0.01	.76	.32	.27	982	1085.2	287.6	88.6
06.50	0.76	0.00	0.02	.77	.32	.26	986	1085.6	286.3	88.2
06.75	0.75	0.00	0.02	.77	.32	.26	984	1085.9	285.0	87.9
07.00	0.77	0.00	0.02	.79	.32	.26	990	1086.3	283.7	87.5
07.25	0.78	0.00	0.02	.79	.32	.26	989	1086.7	282.5	87.1
07.50	0.80	0.00	0.02	.81	.31	.25	997	1087.0	281.3	86.7
07.75	0.79	0.00	0.02	.81	.31	.25	997	1087.4	280.1	86.3
08.00	0.79	0.00	0.02	.81	.31	.25	997	1087.8	278.9	85.9
08.25	0.79	0.00	0.02	.81	.32	.25	997	1088.2	277.8	85.5
08.50	0.82	0.00	0.02	.84	.30	.24	1007	1088.6	276.6	85.1
08.75	0.89	0.00	0.02	.91	.27	.21	1031	1089.0	275.5	84.7
09.00	1.11	0.00	0.02	1.12	.18	.12	1095	1089.4	274.5	84.3
09.25	1.25	0.00	0.02	1.27	.13	.07	1135	1089.8	273.4	83.9
09.50	0.80	0.00	0.02	.81	.33	.26	991	1090.2	272.4	83.5
09.75	0.64	0.00	0.02	.66	.42	.35	934	1090.7	271.3	83.1
10.00	0.63	0.00	0.02	.64	.44	.37	927	1091.1	270.3	82.6
10.25	0.60	0.00	0.02	.61	.46	.39	914	1091.5	269.3	82.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40910.50	0.68	0.00	0.02	.70	-17.40	-17.33	951	1092.0	268.4	81.8
10.75	0.70	0.00	0.02	.71	.40	.33	955	1092.5	267.4	81.4
11.00	0.75	0.00	0.02	.77	.37	.30	978	1092.9	266.4	81.0
11.25	0.86	0.00	0.02	.88	.31	.24	1018	1093.4	265.5	80.5
11.50	0.94	0.00	0.02	.96	.28	.20	1044	1093.9	264.6	80.1
11.75	1.02	0.00	0.01	1.04	.24	.17	1069	1094.4	263.7	79.7
12.00	0.93	0.00	0.01	.94	.29	.21	1038	1094.4	262.8	79.2
12.25	0.89	0.00	0.01	.90	.31	.24	1025	1095.4	261.9	78.8
12.50	0.79	0.00	0.01	.81	.36	.28	993	1095.8	261.0	78.4
12.75	0.68	0.00	0.01	.70	.42	.35	951	1096.3	260.1	77.9
13.00	0.63	0.00	0.01	.65	.46	.38	930	1096.8	259.3	77.5
13.25	0.60	0.00	0.01	.61	.49	.41	913	1097.3	258.4	77.0
13.50	0.58	0.00	0.01	.59	.51	.43	904	1097.8	257.6	76.6
13.75	0.61	0.01	0.01	.63	.48	.40	922	1098.3	256.7	76.1
14.00	0.61	0.03	0.01	.65	.47	.39	931	1098.8	255.9	75.7
14.25	0.61	0.04	0.01	.67	.46	.38	940	1099.3	255.1	75.2
14.50	0.60	0.06	0.01	.67	.46	.38	939	1099.8	254.3	74.8
14.75	0.63	0.07	0.01	.71	.44	.36	956	1100.3	253.5	74.3
15.00	0.59	0.08	0.01	.68	.46	.38	944	1100.8	252.7	73.9
15.25	0.55	0.09	0.01	.66	.48	.39	936	1101.3	251.9	73.4
15.50	0.53	0.10	0.01	.64	.49	.41	928	1101.8	251.1	73.0
15.75	0.50	0.10	0.01	.61	.52	.43	915	1102.3	250.3	72.5
16.00	0.49	0.11	0.01	.61	.52	.43	916	1102.8	249.5	72.1
40972.25	0.66	-0.25	-0.04	.37	-17.79	-17.65	1111	1107.8	91.7	-46.5
72.50	0.65	-0.24	-0.04	.36	.80	.66	1104	1108.2	90.5	-47.0
72.75	0.63	-0.23	-0.04	.35	.82	.67	1096	1108.6	89.3	-47.5
73.00	0.60	-0.22	-0.04	.33	.84	.70	1081	1109.0	88.1	-48.0
73.25	0.58	-0.21	-0.04	.33	.84	.70	1082	1109.5	86.9	-48.5
73.50	0.59	-0.20	-0.04	.35	.82	.67	1098	1109.9	85.6	-49.0
73.75	0.57	-0.18	-0.04	.35	.81	.67	1101	1110.3	84.3	-49.5
74.00	0.56	-0.17	-0.04	.36	.80	.66	1110	1110.8	83.0	-50.0
74.25	0.55	-0.15	-0.04	.36	.80	.65	1107	1111.2	81.6	-50.5
74.50	0.54	-0.13	-0.04	.37	.79	.64	1115	1111.7	80.2	-51.0
74.75	0.53	-0.11	-0.04	.38	.78	.63	1124	1112.1	78.8	-51.5
75.00	0.51	-0.09	-0.03	.38	.78	.63	1124	1112.6	77.3	-52.0
75.25	0.49	-0.07	-0.03	.39	.77	.62	1130	1113.1	75.9	-52.5
75.50	0.49	-0.05	-0.03	.40	.76	.61	1136	1113.6	74.2	-52.9
75.75	0.47	-0.03	-0.03	.40	.76	.61	1136	1114.1	72.6	-53.4
76.00	0.45	0.00	-0.03	.42	.74	.58	1147	1114.6	71.0	-53.8
76.25	0.43	0.00	-0.03	.40	.77	.60	1134	1115.1	69.2	-54.3
76.50	0.42	0.00	-0.03	.39	.78	.61	1127	1115.6	67.5	-54.7
76.75	0.38	0.00	-0.03	.35	.82	.66	1099	1116.1	65.6	-55.2
77.00	0.37	0.00	-0.03	.34	.83	.68	1092	1116.7	63.8	-55.6
77.25	0.34	0.00	-0.03	.31	.87	.72	1068	1117.2	61.8	-56.0
77.50	0.33	0.00	-0.03	.30	.88	.74	1061	1117.7	59.8	-56.5
77.75	0.33	0.00	-0.02	.30	.88	.74	1061	1118.3	57.7	-56.9
78.00	0.38	0.00	-0.02	.36	.81	.66	1111	1118.8	55.5	-57.2
78.25	0.52	0.00	-0.02	.50	.67	.52	1192	1119.4	53.3	-57.6
78.50	0.66	0.00	-0.02	.64	.57	.40	1244	1119.9	51.0	-58.0
78.75	0.66	0.00	-0.02	.64	.58	.39	1242	1120.5	48.6	-58.3
79.00	0.65	0.00	-0.02	.63	.59	.40	1238	1121.1	46.1	-58.7
79.25	0.62	0.00	-0.02	.60	.61	.43	1226	1121.6	43.5	-59.0
79.50	0.61	0.00	-0.02	.59	.62	.43	1221	1122.2	40.9	-59.3
79.75	0.60	0.00	-0.02	.58	.63	.44	1217	1122.8	38.1	-59.6
80.00	0.60	0.00	-0.02	.58	.63	.44	1216	1123.4	35.3	-59.9
80.25	0.60	0.00	-0.01	.59	.62	.43	1219	1123.9	32.5	-60.1
80.50	0.49	0.00	-0.01	.48	.71	.53	1169	1124.5	29.5	-60.4
80.75	0.41	0.00	-0.01	.39	.80	.63	1116	1125.1	26.5	-60.6

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40981.00	0.39	0.00	-0.01	.37	-17.82	-17.65	1102	1125.7	23.4	-60.8
81.25	0.45	0.00	-0.01	.44	.75	.58	1146	1126.3	20.3	-61.0
81.50	0.61	0.00	-0.01	.60	.62	.44	1220	1126.8	17.1	-61.1
81.75	0.53	0.00	-0.01	.52	.68	.50	1185	1127.4	13.9	-61.2
82.00	0.48	0.00	-0.01	.47	.73	.55	1159	1128.0	10.7	-61.3
82.25	0.47	0.00	-0.01	.46	.74	.56	1152	1128.6	7.5	-61.4
82.50	0.48	0.00	-0.01	.47	.73	.55	1157	1129.2	4.3	-61.4
82.75	0.50	0.00	-0.01	.49	.72	.53	1167	1129.8	1.0	-61.5
83.00	0.51	0.00	0.00	.50	.71	.53	1172	1130.4	357.9	-61.5
83.25	0.51	0.00	0.00	.50	.71	.53	1171	1130.9	354.7	-61.5
83.50	0.50	0.00	0.00	.50	.71	.53	1169	1131.5	351.6	-61.4
83.75	0.50	0.00	0.00	.50	.72	.53	1167	1132.1	348.6	-61.4
84.00	0.47	0.00	0.00	.47	.74	.56	1152	1132.7	345.6	-61.3
84.25	0.45	0.00	0.00	.45	.76	.58	1141	1133.3	342.7	-61.2
84.50	0.43	0.00	0.00	.43	.78	.60	1130	1133.9	339.8	-61.0
84.75	0.42	0.00	0.00	.43	.78	.61	1130	1134.5	337.1	-60.9
85.00	0.40	0.00	0.00	.40	.82	.64	1105	1135.1	334.4	-60.7
85.25	0.40	0.00	0.00	.40	.82	.64	1104	1135.7	331.8	-60.6
85.50	0.39	0.00	0.00	.40	.81	.64	1107	1136.2	329.3	-60.4
85.75	0.39	0.00	0.01	.39	.82	.65	1102	1136.8	326.8	-60.2
86.00	0.38	0.00	0.01	.38	.83	.67	1096	1137.4	324.5	-59.9
86.25	0.37	0.00	0.01	.38	.83	.67	1096	1138.0	322.2	-59.7
86.50	0.37	0.00	0.01	.38	.83	.67	1095	1138.6	320.0	-59.5
86.75	0.40	0.00	0.01	.41	.81	.64	1112	1139.2	317.9	-59.2
87.00	0.40	0.00	0.01	.41	.81	.64	1109	1139.7	315.8	-58.9
87.25	0.40	0.00	0.01	.41	.81	.64	1108	1140.3	313.8	-58.6
87.50	0.40	0.00	0.01	.42	.80	.63	1115	1140.9	311.9	-58.4
87.75	0.39	0.00	0.01	.40	.82	.66	1102	1141.5	310.1	-58.1
88.00	0.39	0.00	0.01	.40	.82	.66	1102	1142.1	308.3	-57.8
88.25	0.38	0.00	0.01	.39	.84	.67	1090	1142.6	306.5	-57.4
88.50	0.38	0.00	0.01	.39	.84	.67	1086	1143.2	304.9	-57.1
88.75	0.38	0.00	0.02	.39	.84	.68	1085	1143.8	303.2	-56.8
89.00	0.37	0.00	0.02	.39	.84	.68	1085	1144.4	301.6	-56.5
89.25	0.36	0.00	0.02	.38	.86	.69	1075	1144.9	300.1	-56.1
89.50	0.36	0.00	0.02	.38	.86	.69	1073	1145.5	298.6	-55.8
90.00	0.35	0.00	0.02	.37	.87	.71	1064	1146.7	295.8	-55.1
90.25	0.33	0.00	0.02	.35	.90	.73	1042	1147.2	294.4	-54.7
90.50	0.33	0.00	0.02	.36	.89	.72	1049	1147.8	293.1	-54.4
90.75	0.33	0.00	0.02	.35	.90	.74	1042	1148.4	291.8	-54.0
91.00	0.33	0.00	0.02	.35	.91	.74	1038	1148.9	290.5	-53.7
91.25	0.34	0.00	0.02	.37	.89	.72	1052	1149.5	289.3	-53.3
91.50	0.33	0.00	0.02	.36	.90	.73	1043	1150.1	288.0	-52.9
91.75	0.32	0.00	0.02	.35	.91	.74	1033	1150.6	286.9	-52.5
92.00	0.30	0.00	0.03	.33	.94	.77	1018	1151.2	285.7	-52.2
92.25	0.30	0.00	0.03	.33	.93	.77	1021	1151.7	284.6	-51.8
92.50	0.27	0.00	0.03	.30	.97	.81	992	1152.3	283.5	-51.4
92.75	0.27	0.00	0.03	.30	.98	.81	987	1152.8	282.4	-51.0
93.00	0.26	0.00	0.03	.29	-18.00	.83	970	1153.4	281.3	-50.6
93.25	0.26	0.00	0.03	.29	.00	.83	973	1153.9	280.3	-50.2
93.50	0.26	0.00	0.03	.29	.00	.83	976	1154.5	279.2	-49.8
93.75	0.26	0.00	0.03	.29	.00	.83	974	1155.0	278.2	-49.5
94.00	0.27	0.00	0.03	.30	-17.99	.82	979	1155.6	277.2	-49.1
94.25	0.26	0.00	0.03	.29	-18.01	.84	967	1156.1	276.2	-48.7
94.50	0.27	0.00	0.03	.30	-17.99	.82	976	1156.7	275.3	-48.3
94.75	0.27	0.00	0.03	.30	-18.00	.83	973	1157.2	274.3	-47.9
95.00	0.27	0.00	0.03	.30	.00	.83	970	1157.8	273.4	-47.5
95.25	0.28	0.00	0.03	.31	-17.99	.81	978	1158.3	272.5	-47.1
95.50	0.28	0.00	0.03	.32	.97	.80	988	1158.8	271.6	-46.7
95.75	0.27	0.00	0.03	.31	.99	.81	979	1159.4	270.7	-46.2
96.00	0.28	0.00	0.03	.32	.98	.80	986	1159.9	269.8	-45.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40996.25	0.31	0.00	0.04	.35	-17.94	-17.76	1010	1160.5	268.9	-45.4
96.50	0.31	0.00	0.04	.35	.94	.77	1005	1161.0	268.1	-45.0
96.75	0.31	0.00	0.04	.34	.96	.79	968	1161.5	267.2	-44.6
97.00	0.32	0.00	0.04	.36	.94	.76	1001	1162.0	266.4	-44.2
97.25	0.33	0.00	0.04	.37	.93	.75	1010	1162.6	265.5	-43.8
97.50	0.33	0.00	0.04	.37	.93	.75	1008	1163.1	264.7	-43.4
97.75	0.33	0.00	0.04	.37	.94	.75	1004	1163.6	263.9	-43.0
98.00	0.38	0.00	0.04	.42	.89	.70	1037	1164.1	263.1	-42.5
98.25	0.38	0.00	0.04	.42	.89	.70	1032	1164.6	262.3	-42.1
98.50	0.35	0.00	0.04	.40	.91	.72	1019	1165.1	261.5	-41.7
98.75	0.29	0.03	0.04	.36	.95	.77	990	1165.6	260.7	-41.3
99.00	0.23	0.06	0.04	.33	.99	.81	961	1166.1	259.9	-40.9
99.25	0.21	0.09	0.04	.34	.98	.80	967	1166.6	259.2	-40.5
99.50	0.19	0.11	0.04	.34	.99	.80	966	1167.1	258.4	-40.0
99.75	0.17	0.13	0.04	.34	.99	.80	966	1167.5	257.6	-39.6
41000.00	0.17	0.15	0.04	.37	.95	.76	989	1168.0	256.9	-39.2
00.25	0.15	0.17	0.04	.36	.97	.78	979	1168.5	256.1	-38.8
00.50	0.13	0.16	0.04	.36	.97	.78	977	1168.9	255.4	-38.3
00.75	0.11	0.20	0.04	.35	.98	.79	967	1169.4	254.7	-37.9
01.00	0.09	0.21	0.04	.34	-18.00	.80	956	1169.8	253.9	-37.5
01.25	0.06	0.22	0.05	.32	.02	.83	936	1170.3	253.2	-37.1
01.50	0.03	0.23	0.05	.31	.04	.85	926	1170.7	252.5	-36.7
01.75	0.03	0.24	0.05	.31	.04	.85	926	1171.1	251.8	-36.2
02.00	0.04	0.24	0.05	.33	.01	.82	946	1171.6	251.0	-35.8
02.25	0.03	0.25	0.05	.32	.03	.83	933	1172.0	250.3	-35.4
02.50	0.02	0.25	0.05	.32	.03	.84	930	1172.4	249.6	-34.9
02.75	0.00	0.26	0.05	.30	.06	.86	912	1172.8	248.9	-34.5
03.00	0.00	0.26	0.05	.31	.05	.85	919	1173.2	248.2	-34.1
03.25	0.00	0.27	0.05	.32	.03	.84	926	1173.5	247.6	-33.7
03.50	0.00	0.27	0.05	.32	.03	.84	925	1173.9	246.9	-33.2
03.75	-0.02	0.28	0.05	.31	.05	.85	914	1174.3	246.2	-32.8
04.00	-0.01	0.28	0.05	.32	.04	.84	923	1174.6	245.5	-32.4
04.25	-0.02	0.29	0.05	.32	.04	.84	922	1174.9	244.8	-31.9
04.50	-0.01	0.29	0.05	.33	.02	.83	928	1175.3	244.1	-31.5
04.75	0.00	0.29	0.05	.34	.01	.81	936	1175.6	243.5	-31.1
05.00	0.00	0.30	0.05	.35	.00	.80	943	1175.9	242.8	-30.6
05.25	0.00	0.30	0.05	.35	.00	.80	941	1176.2	242.1	-30.2
05.50	0.02	0.30	0.05	.37	-17.98	.78	954	1176.5	241.5	-29.8
05.75	0.03	0.30	0.05	.38	.97	.77	960	1176.7	240.8	-29.3
06.00	0.02	0.30	0.05	.37	.98	.78	948	1177.0	240.2	-28.9
06.25	0.03	0.30	0.05	.39	.96	.76	963	1177.2	239.5	-28.5
06.50	0.04	0.30	0.05	.40	.95	.75	970	1177.5	238.9	-28.0
06.75	0.05	0.30	0.05	.40	.95	.75	969	1177.7	238.2	-27.6
07.00	0.06	0.30	0.05	.42	.93	.73	980	1177.9	237.6	-27.2
07.25	0.08	0.30	0.05	.44	.91	.70	990	1178.1	236.9	-26.7
07.50	0.09	0.30	0.05	.44	.91	.70	989	1178.3	236.3	-26.3
07.75	0.14	0.30	0.05	.49	.86	.66	1018	1178.4	235.6	-25.9
08.00	0.18	0.30	0.05	.53	.83	.62	1038	1178.6	235.0	-25.4
08.25	0.18	0.30	0.05	.53	.83	.62	1036	1178.7	234.4	-25.0
08.50	0.10	0.30	0.05	.45	.90	.69	987	1178.9	233.7	-24.6
08.75	-0.01	0.30	0.05	.33	-18.03	.83	898	1179.0	233.1	-24.1
09.00	-0.04	0.29	0.05	.31	.06	.86	883	1179.1	232.5	-23.7
09.25	-0.03	0.29	0.05	.32	.05	.84	891	1179.2	231.8	-23.3
09.50	-0.02	0.29	0.05	.32	.05	.84	892	1179.2	231.2	-22.8
09.75	-0.01	0.29	0.05	.32	.05	.84	891	1179.3	230.6	-22.4
10.00	0.00	0.28	0.05	.33	.03	.83	897	1179.4	230.0	-22.0
10.25	0.01	0.28	0.05	.34	.02	.82	904	1179.4	229.3	-21.5
10.50	0.01	0.28	0.05	.34	.02	.82	904	1179.4	228.7	-21.1
10.75	0.01	0.28	0.05	.34	.02	.82	903	1179.4	228.1	-20.7
11.00	0.01	0.28	0.05	.34	.03	.82	902	1179.4	227.5	-20.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41011.25	0.02	0.27	0.05	.34	-16.03	-17.82	901	1179.3	226.9	-19.8
11.50	0.01	0.27	0.05	.33	.04	.83	891	1179.3	226.3	-19.3
11.75	0.02	0.27	0.05	.33	.04	.83	890	1179.2	225.7	-18.9
12.00	0.02	0.26	0.05	.33	.04	.83	889	1179.2	225.0	-18.5
12.25	0.01	0.26	0.05	.32	.05	.84	880	1179.1	224.4	-18.0
12.50	0.02	0.26	0.05	.33	.04	.83	887	1179.0	223.8	-17.6
12.75	0.02	0.25	0.05	.33	.04	.83	886	1178.9	223.2	-17.2
13.00	0.02	0.25	0.05	.32	.05	.84	877	1178.8	222.6	-16.7
13.25	0.01	0.25	0.05	.31	.06	.85	867	1178.6	222.0	-16.3
13.50	0.04	0.24	0.05	.33	.03	.83	883	1178.5	221.4	-15.8
13.75	0.05	0.24	0.05	.33	.03	.83	882	1178.3	220.8	-15.4
14.00	0.07	0.24	0.05	.35	.00	.80	897	1178.1	220.2	-15.0
14.25	0.06	0.23	0.05	.33	.03	.82	879	1178.0	219.6	-14.5
14.50	0.05	0.23	0.05	.33	.03	.82	878	1177.8	219.0	-14.1
14.75	0.05	0.22	0.05	.32	.04	.84	869	1177.6	218.4	-13.6
15.00	0.07	0.22	0.04	.33	.03	.82	877	1177.3	217.8	-13.2
15.25	0.07	0.22	0.04	.33	.03	.82	876	1177.1	217.2	-12.8
15.50	0.06	0.21	0.04	.31	.06	.85	859	1176.9	216.6	-12.3
15.75	0.05	0.21	0.04	.30	.07	.86	849	1176.6	216.0	-11.9
16.00	0.04	0.21	0.04	.29	.09	.88	840	1176.4	215.4	-11.4
16.25	0.04	0.20	0.04	.28	.10	.90	830	1176.1	214.8	-11.0
16.50	0.06	0.20	0.04	.30	.07	.87	847	1175.8	214.2	-10.6
16.75	0.07	0.19	0.04	.31	.06	.85	854	1175.5	213.6	-10.1
17.00	0.07	0.19	0.04	.30	.07	.86	845	1175.2	213.0	-9.7
17.25	0.07	0.18	0.04	.29	.08	.88	836	1174.9	212.4	-9.2
17.50	0.05	0.18	0.04	.27	.12	.91	817	1174.6	211.8	-8.8
17.75	0.05	0.17	0.04	.26	.13	.93	807	1174.2	211.2	-8.3
18.00	0.04	0.17	0.04	.25	.15	.94	795	1173.9	210.7	-7.9
41051.25	0.72	-0.39	-0.03	.30	-17.88	-17.78	851	1103.4	127.3	49.1
51.50	0.73	-0.39	-0.03	.31	.86	.77	874	1102.9	126.5	49.5
51.75	0.73	-0.39	-0.03	.31	.86	.76	880	1102.5	125.7	49.9
52.00	0.73	-0.39	-0.03	.31	.85	.76	880	1102.1	124.9	50.3
52.25	0.73	-0.39	-0.03	.31	.85	.76	881	1101.6	124.0	50.7
52.50	0.75	-0.39	-0.03	.32	.84	.75	890	1101.3	123.2	51.1
52.75	0.75	-0.39	-0.03	.34	.81	.72	912	1100.9	122.3	51.5
53.00	0.75	-0.39	-0.03	.34	.81	.72	917	1100.5	121.5	51.8
53.25	0.74	-0.39	-0.03	.33	.82	.73	912	1100.2	120.6	52.2
53.50	0.75	-0.38	-0.03	.34	.80	.71	927	1099.8	119.7	52.6
53.75	0.74	-0.38	-0.03	.32	.82	.74	912	1099.5	118.8	53.0
54.00	0.70	-0.36	-0.03	.29	.87	.78	882	1099.2	117.8	53.4
54.25	0.69	-0.38	-0.03	.27	.90	.81	863	1098.9	116.9	53.8
54.50	0.69	-0.38	-0.03	.28	.88	.79	875	1098.7	115.9	54.1
54.75	0.71	-0.38	-0.03	.30	.85	.76	895	1098.4	115.0	54.5
55.00	0.77	-0.38	-0.03	.36	.77	.68	953	1098.2	114.0	54.9
55.25	0.79	-0.38	-0.03	.39	.73	.65	977	1098.0	113.0	55.3
55.50	0.87	-0.37	-0.03	.46	.66	.57	1027	1097.8	111.9	55.7
55.75	0.97	-0.37	-0.03	.56	.58	.49	1081	1097.6	110.9	56.0
56.00	1.25	-0.37	-0.03	.85	.41	.31	1184	1097.4	109.8	56.4
56.25	1.11	-0.37	-0.03	.71	.49	.39	1133	1097.2	108.7	56.8
56.50	1.03	-0.36	-0.03	.64	.53	.43	1111	1097.1	107.6	57.2
56.75	0.94	-0.36	-0.03	.54	.60	.51	1069	1097.0	106.5	57.5
57.00	0.81	-0.36	-0.03	.42	.71	.61	997	1096.9	105.3	57.9
57.25	0.81	-0.35	-0.03	.42	.70	.61	998	1096.8	104.1	58.2
57.50	0.81	-0.35	-0.03	.43	.69	.60	1008	1096.7	102.9	58.6
57.75	0.80	-0.35	-0.03	.42	.70	.61	1006	1096.6	101.7	59.0
58.00	0.80	-0.34	-0.03	.42	.70	.61	1008	1096.6	100.4	59.3
58.25	0.79	-0.34	-0.03	.43	.69	.60	1016	1096.5	99.1	59.7
58.50	0.81	-0.33	-0.03	.45	.67	.58	1030	1096.5	97.7	60.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41058.75	0.80	-0.33	-0.03	.45	-17.66	-17.57	1036	1096.5	96.4	60.3
59.00	0.80	-0.32	-0.03	.45	.66	.57	1039	1096.5	94.9	60.7
59.25	0.80	-0.32	-0.03	.46	.65	.57	1042	1096.5	93.5	61.0
59.50	0.79	-0.31	-0.03	.45	.66	.58	1036	1096.5	92.0	61.3
59.75	0.80	-0.31	-0.03	.47	.64	.56	1051	1096.6	90.4	61.6
60.00	0.79	-0.30	-0.03	.47	.65	.56	1049	1096.7	88.9	61.9
60.25	0.77	-0.29	-0.03	.45	.67	.56	1035	1096.8	87.2	62.2
60.50	0.76	-0.29	-0.03	.44	.68	.59	1031	1096.9	85.5	62.5
60.75	0.74	-0.28	-0.03	.43	.68	.59	1030	1097.0	83.8	62.8
61.00	0.73	-0.27	-0.03	.43	.68	.59	1033	1097.1	82.0	63.1
61.25	0.72	-0.26	-0.03	.43	.68	.59	1033	1097.3	80.1	63.4
61.50	0.70	-0.26	-0.03	.41	.70	.61	1020	1097.4	78.2	63.6
61.75	0.69	-0.25	-0.02	.42	.69	.60	1029	1097.6	76.2	63.9
62.00	0.68	-0.24	-0.02	.42	.69	.60	1031	1097.8	74.1	64.1
62.25	0.69	-0.23	-0.02	.43	.68	.59	1039	1098.0	72.0	64.4
62.50	0.67	-0.22	-0.02	.43	.68	.59	1039	1098.2	69.8	64.6
62.75	0.77	-0.21	-0.02	.54	.59	.50	1097	1098.4	67.5	64.8
63.00	0.80	-0.19	-0.02	.58	.57	.47	1109	1098.7	65.2	65.0
63.25	0.75	-0.18	-0.02	.55	.60	.50	1093	1098.9	62.8	65.2
63.50	0.67	-0.17	-0.02	.48	.65	.55	1063	1099.2	60.3	65.3
63.75	0.65	-0.16	-0.02	.47	.65	.56	1062	1099.5	57.7	65.5
64.00	0.62	-0.14	-0.02	.46	.66	.57	1055	1099.7	55.1	65.6
64.25	0.59	-0.12	-0.02	.44	.68	.59	1046	1100.0	52.4	65.7
64.50	0.56	-0.11	-0.02	.43	.69	.60	1041	1100.3	49.6	65.8
64.75	0.54	-0.09	-0.02	.43	.69	.60	1042	1100.7	46.7	65.9
65.00	0.50	-0.08	-0.02	.41	.71	.62	1027	1101.0	43.8	66.0
65.25	0.47	-0.05	-0.02	.41	.71	.62	1028	1101.3	40.8	66.0
65.50	0.44	-0.03	-0.02	.39	.73	.64	1021	1101.7	37.8	66.0
65.75	0.38	0.00	-0.02	.36	.76	.67	1001	1102.0	34.7	66.0
66.00	0.35	0.00	-0.02	.33	.80	.71	977	1102.4	31.6	66.0
66.25	0.31	0.00	-0.02	.29	.86	.76	941	1102.8	28.5	66.0
66.50	0.28	0.00	-0.01	.27	.89	.80	921	1103.1	25.4	65.9
66.75	0.26	0.00	-0.01	.25	.92	.83	899	1103.5	22.3	65.8
67.00	0.30	0.00	-0.01	.28	.88	.78	932	1103.9	19.2	65.7
67.25	0.31	0.00	-0.01	.29	.86	.77	942	1104.3	16.1	65.5
67.50	0.32	0.00	-0.01	.30	.85	.75	952	1104.7	13.0	65.4
67.75	0.33	0.00	-0.01	.32	.82	.73	968	1105.2	10.0	65.2
68.00	0.34	0.00	-0.01	.33	.82	.72	974	1105.6	7.0	65.0
68.25	0.34	0.00	-0.01	.33	.82	.72	975	1106.0	4.1	64.8
68.50	0.34	0.00	-0.01	.33	.82	.72	973	1106.5	1.3	64.5
68.75	0.34	0.00	-0.01	.33	.82	.72	974	1106.9	358.5	64.3
69.00	0.35	0.00	-0.01	.34	.81	.71	985	1107.4	355.8	64.0
69.25	0.35	0.00	-0.01	.34	.81	.71	981	1107.8	353.2	63.7
69.50	0.40	0.00	-0.01	.39	.76	.66	1020	1108.3	350.6	63.4
69.75	0.45	0.00	-0.01	.45	.70	.60	1058	1108.8	348.1	63.0
70.00	0.36	0.00	-0.01	.36	.80	.70	995	1109.3	345.7	62.7
70.25	0.28	0.00	-0.01	.27	.92	.82	914	1109.8	343.4	62.3
70.50	0.27	0.00	-0.01	.26	.94	.83	905	1110.2	341.2	62.0
70.75	0.25	0.00	0.00	.24	.97	.87	882	1110.7	339.0	61.6
71.00	0.27	0.00	0.00	.26	.94	.84	906	1111.2	336.9	61.2
71.25	0.27	0.00	0.00	.26	.94	.84	900	1111.7	334.8	60.8
71.50	0.28	0.00	0.00	.27	.93	.82	913	1112.3	332.9	60.4
71.75	0.29	0.00	0.00	.28	.91	.81	930	1112.8	331.0	60.0
72.00	0.29	0.00	0.00	.29	.90	.79	944	1113.3	329.1	59.6
72.25	0.30	0.00	0.00	.30	.88	.78	954	1113.8	327.3	59.1
72.50	0.30	0.00	0.00	.30	.89	.78	953	1114.4	325.6	58.7
72.75	0.31	0.00	0.00	.31	.87	.77	964	1114.9	323.9	58.2
73.00	0.35	0.00	0.00	.35	.83	.72	997	1115.4	322.3	57.8
73.25	0.41	0.00	0.00	.41	.77	.65	1037	1116.0	320.7	57.3
73.50	0.37	0.00	0.00	.37	.82	.70	1003	1116.5	319.2	56.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41073.75	0.32	0.00	0.00	.32	-17.87	-17.76	967	1117.1	317.7	56.4
74.00	0.31	0.00	0.00	.31	.89	.77	963	1117.6	316.2	55.9
74.25	0.30	0.00	0.00	.31	.89	.78	963	1118.2	314.8	55.4
74.50	0.26	0.00	0.01	.29	.92	.81	944	1118.7	313.4	54.9
74.75	0.30	0.00	0.01	.30	.91	.79	954	1119.3	312.1	54.4
75.00	0.29	0.00	0.01	.30	.91	.80	948	1119.8	310.8	53.9
75.25	0.30	0.00	0.01	.31	.91	.79	953	1120.4	309.5	53.5
75.50	0.30	0.00	0.01	.31	.90	.79	958	1121.0	308.3	53.0
75.75	0.30	0.00	0.01	.30	.92	.80	955	1121.6	307.1	52.5
76.00	0.29	0.00	0.01	.30	.92	.80	955	1122.1	305.9	51.9
76.25	0.27	0.00	0.01	.28	.95	.83	933	1122.7	304.7	51.4
76.50	0.28	0.00	0.01	.29	.94	.82	944	1123.3	303.6	50.9
76.75	0.30	0.00	0.01	.31	.91	.79	963	1123.9	302.5	50.4
77.00	0.32	0.00	0.01	.33	.89	.77	974	1124.4	301.4	49.9
77.25	0.34	0.00	0.01	.35	.88	.75	986	1125.0	300.3	49.4
77.50	0.42	0.00	0.01	.44	.79	.66	1047	1125.6	299.2	48.9
77.75	0.44	0.00	0.01	.46	.78	.64	1052	1126.2	298.2	48.3
78.00	0.41	0.00	0.02	.42	.83	.68	1022	1126.8	297.2	47.8
78.25	0.39	0.00	0.02	.41	.84	.70	1015	1127.4	296.2	47.3
78.50	0.36	0.00	0.02	.38	.87	.73	995	1127.9	295.2	46.8
78.75	0.33	0.00	0.02	.35	.90	.77	974	1128.5	294.2	46.2
79.00	0.34	0.00	0.02	.36	.89	.75	984	1129.1	293.3	45.7
79.25	0.34	0.00	0.02	.36	.89	.75	989	1129.7	292.3	45.2
79.50	0.35	0.00	0.02	.37	.88	.74	999	1130.3	291.4	44.6
79.75	0.35	0.00	0.02	.37	.88	.75	998	1130.9	290.5	44.1
80.00	0.34	0.00	0.02	.36	.90	.76	989	1131.5	289.6	43.6
80.25	0.35	0.00	0.02	.37	.89	.75	996	1132.1	288.7	43.0
80.50	0.33	0.00	0.02	.35	.91	.77	961	1132.7	287.8	42.5
80.75	0.34	0.00	0.02	.37	.89	.75	1000	1133.3	287.0	42.0
81.00	0.33	0.00	0.02	.36	.91	.77	990	1133.9	286.1	41.4
81.25	0.34	0.00	0.02	.36	.91	.77	985	1134.5	285.2	40.9
81.50	0.33	0.00	0.02	.35	.93	.78	976	1135.1	284.4	40.4
81.75	0.33	0.00	0.02	.36	.91	.77	990	1135.6	283.6	39.8
82.00	0.33	0.00	0.03	.36	.91	.77	992	1136.2	282.8	39.3
82.25	0.32	0.00	0.03	.35	.93	.79	982	1136.8	281.9	38.7
82.50	0.33	0.00	0.03	.35	.93	.79	984	1137.4	281.1	38.2
82.75	0.31	0.00	0.03	.34	.94	.80	979	1138.0	280.3	37.6
83.00	0.30	0.00	0.03	.33	.96	.81	971	1138.6	279.5	37.1
83.25	0.30	0.00	0.03	.33	.96	.81	969	1139.2	278.8	36.6
83.50	0.29	0.00	0.03	.32	.98	.83	960	1139.8	278.0	36.0
83.75	0.29	0.00	0.03	.32	.98	.83	960	1140.3	277.2	35.5
84.00	0.28	0.00	0.03	.31	-18.00	.85	949	1140.9	276.4	34.9
84.25	0.26	0.00	0.03	.29	.03	.88	926	1141.5	275.7	34.4
84.50	0.27	0.00	0.03	.30	.01	.87	938	1142.1	274.9	33.8
84.75	0.28	0.00	0.03	.31	.00	.85	949	1142.6	274.2	33.3
85.00	0.31	0.00	0.03	.34	-17.96	.81	974	1143.2	273.4	32.7
85.25	0.32	0.00	0.03	.35	.96	.81	979	1143.8	272.7	32.2
85.50	0.35	0.00	0.03	.39	.91	.76	1010	1144.4	271.9	31.6
85.75	0.39	0.00	0.03	.43	.87	.72	1037	1144.9	271.2	31.1
86.00	0.42	0.00	0.03	.45	.86	.71	1048	1145.5	270.5	30.5
86.25	0.42	0.00	0.03	.45	.86	.71	1046	1146.0	269.8	30.0
86.50	0.40	0.00	0.03	.44	.87	.72	1042	1146.6	269.0	29.4
86.75	0.40	0.00	0.03	.44	.87	.72	1045	1147.2	268.3	28.9
87.00	0.40	0.00	0.04	.43	.88	.73	1038	1147.7	267.6	28.3
87.25	0.37	0.00	0.04	.41	.90	.75	1025	1148.2	266.9	27.8
87.50	0.33	0.00	0.04	.36	.96	.80	988	1148.8	266.2	27.2
87.75	0.31	0.00	0.04	.35	.97	.82	980	1149.3	265.5	26.7
88.00	0.34	0.00	0.04	.37	.95	.80	993	1149.9	264.8	26.1
88.25	0.34	0.03	0.04	.41	.92	.76	1018	1150.4	264.1	25.6
88.50	0.30	0.06	0.04	.48	.86	.70	1057	1150.9	263.4	25.0

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41088.75	0.40	0.09	0.04	.52	-17.83	-17.67	1073	1151.4	262.7	24.5
89.00	0.40	0.11	0.04	.54	.82	.65	1064	1151.9	262.1	23.9
89.25	0.30	0.13	0.04	.47	.88	.71	1044	1152.4	261.4	23.3
89.50	0.23	0.15	0.04	.42	.92	.76	1014	1153.0	260.7	22.8
89.75	0.17	0.17	0.04	.38	.96	.80	986	1153.4	260.0	22.2
90.00	0.12	0.16	0.04	.34	-18.01	.85	957	1153.9	259.3	21.7
90.25	0.09	0.19	0.04	.32	.03	.87	943	1154.4	258.7	21.1
90.50	0.03	0.20	0.04	.28	.09	.93	904	1154.9	258.0	20.6
90.75	0.01	0.22	0.04	.27	.11	.95	893	1155.4	257.3	20.0
91.00	-0.01	0.23	0.04	.26	.13	.96	882	1155.8	256.7	19.5
91.25	-0.03	0.24	0.04	.25	.15	.98	873	1156.3	256.0	18.9
91.50	-0.05	0.24	0.04	.24	.17	-18.00	861	1156.7	255.4	18.3
91.75	-0.07	0.25	0.04	.23	.19	.02	849	1157.2	254.7	17.8
92.00	-0.06	0.26	0.04	.24	.17	.00	864	1157.6	254.0	17.2
41092.50	-0.09	0.27	0.04	.23	-18.19	-18.02	850	1158.5	252.7	16.1
93.00	-0.11	0.28	0.04	.22	.21	.04	836	1159.3	251.4	15.0
93.50	-0.12	0.29	0.04	.22	.21	.04	837	1160.1	250.1	13.9
94.00	-0.13	0.30	0.04	.21	.24	.06	820	1160.9	248.9	12.8
94.50	-0.14	0.31	0.04	.21	.24	.06	818	1161.6	247.6	11.6
95.00	-0.14	0.31	0.04	.22	.22	.04	832	1162.3	246.3	10.5
95.50	-0.15	0.32	0.04	.22	.22	.05	833	1162.9	245.0	9.4
96.00	-0.16	0.32	0.04	.21	.24	.07	819	1163.5	243.8	8.3
96.50	-0.17	0.32	0.04	.19	.28	.11	786	1164.1	242.5	7.2
97.00	-0.19	0.33	0.04	.18	.31	.14	761	1164.6	241.2	6.1
97.50	-0.19	0.33	0.04	.18	.31	.14	754	1165.1	240.0	4.9
98.00	-0.19	0.33	0.04	.18	.31	.14	766	1165.6	238.7	3.8
98.50	-0.20	0.33	0.04	.17	.34	.16	758	1166.0	237.5	2.7
99.00	-0.20	0.33	0.04	.17	.34	.16	762	1166.4	236.3	1.6
99.50	-0.20	0.32	0.04	.17	.35	.17	756	1166.7	235.0	0.5
41100.00	-0.19	0.32	0.04	.17	.35	.17	744	1167.0	233.8	-0.6
00.50	-0.19	0.32	0.04	.17	.35	.17	742	1167.2	232.5	-1.8
01.00	-0.16	0.31	0.04	.19	.30	.12	774	1167.4	231.3	-2.9
01.50	-0.13	0.31	0.04	.22	.24	.06	805	1167.6	230.1	-4.0
02.00	-0.12	0.31	0.04	.23	.22	.04	819	1167.7	228.8	-5.1
02.50	-0.13	0.30	0.04	.21	.26	.08	802	1167.8	227.6	-6.3
03.00	-0.12	0.29	0.04	.21	.26	.08	804	1167.8	226.4	-7.4
03.50	-0.09	0.29	0.04	.24	.20	.02	832	1167.8	225.2	-8.5
04.00	-0.08	0.28	0.04	.24	.20	.02	817	1167.8	223.9	-9.7
04.50	-0.07	0.28	0.04	.25	.18	.00	830	1167.7	222.7	-10.8
05.00	-0.05	0.27	0.04	.26	.16	-17.99	839	1167.5	221.5	-11.9
05.50	-0.03	0.26	0.04	.27	.15	.97	852	1167.4	220.3	-13.0
06.00	-0.02	0.26	0.04	.27	.15	.97	856	1167.2	219.0	-14.2
06.50	-0.02	0.25	0.03	.26	.16	.98	847	1166.9	217.8	-15.3
07.00	-0.05	0.24	0.03	.23	.22	-18.04	813	1166.6	216.6	-16.4
07.50	-0.06	0.23	0.03	.21	.25	.07	788	1166.3	215.4	-17.5
08.00	-0.06	0.23	0.03	.20	.27	.09	774	1165.9	214.2	-18.6
08.50	-0.06	0.22	0.03	.19	.30	.12	756	1165.5	212.9	-19.8
09.00	-0.04	0.21	0.03	.20	.27	.09	775	1165.0	211.7	-20.9
09.50	-0.03	0.20	0.03	.20	.27	.09	776	1164.5	210.5	-22.0
10.00	-0.01	0.19	0.03	.21	.25	.07	785	1164.0	209.3	-23.1
10.50	0.01	0.19	0.03	.23	.20	.03	806	1163.4	208.1	-24.2
11.00	0.02	0.18	0.03	.22	.22	.05	794	1162.8	206.8	-25.4
11.50	0.01	0.17	0.02	.20	.26	.09	771	1162.1	205.6	-26.5
12.00	0.01	0.16	0.02	.19	.28	.11	757	1161.5	204.4	-27.6
12.50	0.01	0.15	0.02	.18	.30	.13	739	1160.7	203.2	-28.7
13.00	0.02	0.14	0.02	.18	.30	.13	734	1160.0	201.9	-29.8
13.50	0.03	0.13	0.02	.19	.27	.10	748	1159.2	200.7	-30.9
14.00	0.06	0.13	0.02	.21	.22	.05	775	1158.3	199.5	-32.0
14.50	0.08	0.12	0.02	.21	.22	.05	775	1157.5	198.3	-33.2

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41115.00	0.09	0.11	0.01	.21	-18.22	-16.05	775	1156.6	197.0	-34.3
15.50	0.10	0.10	0.01	.21	.21	.05	772	1155.7	195.8	-35.4
16.00	0.10	0.09	0.01	.20	.23	.06	754	1154.7	194.6	-36.5
16.50	0.11	0.08	0.01	.20	.23	.06	755	1153.7	193.3	-37.6
17.00	0.11	0.07	0.01	.19	.25	.08	743	1152.7	192.1	-38.7
17.50	0.13	0.06	0.01	.20	.22	.06	755	1151.6	190.8	-39.8
18.00	0.15	0.05	0.01	.21	.19	.03	766	1150.5	189.6	-40.9
18.50	0.16	0.04	0.01	.20	.21	.05	752	1149.4	188.3	-42.0
19.00	0.16	0.03	0.00	.22	.16	.01	775	1148.3	187.1	-43.1
19.50	0.19	0.02	0.00	.22	.15	.00	771	1147.1	185.8	-44.2
20.00	0.19	0.02	0.00	.21	.17	.02	759	1145.9	184.6	-45.3
20.50	0.17	0.01	0.00	.17	.26	.11	704	1144.7	183.3	-46.4
21.00	0.17	0.00	0.00	.17	.26	.11	705	1143.4	182.0	-47.4
21.50	0.18	-0.01	0.00	.17	.26	.11	709	1142.2	180.8	-48.5
22.00	0.20	-0.02	0.00	.18	.23	.08	724	1140.9	179.5	-49.6
22.50	0.22	-0.03	0.00	.19	.20	.05	735	1139.6	178.2	-50.7
23.00	0.23	-0.04	-0.01	.19	.19	.05	735	1138.2	176.9	-51.8
23.50	0.24	-0.05	-0.01	.19	.19	.04	734	1136.9	175.6	-52.9
24.00	0.25	-0.06	-0.01	.19	.18	.04	732	1135.5	174.3	-54.0
24.50	0.26	-0.06	-0.01	.19	.17	.03	732	1134.1	173.0	-55.1
25.00	0.28	-0.07	-0.01	.19	.16	.03	731	1132.7	171.7	-56.1
25.50	0.29	-0.08	-0.01	.20	.13	.00	743	1131.3	170.4	-57.2
26.00	0.30	-0.09	-0.01	.20	.13	-17.99	744	1129.9	169.1	-58.3
26.50	0.32	-0.10	-0.01	.21	.11	.97	755	1128.5	167.7	-59.3
41126.75	0.33	-0.10	-0.02	.21	-18.10	-17.97	755	1127.7	167.0	-59.9
27.00	0.36	-0.11	-0.02	.24	.03	.91	786	1127.0	166.4	-60.4
27.25	0.37	-0.11	-0.02	.24	.02	.90	787	1126.3	165.7	-60.9
27.50	0.39	-0.11	-0.02	.25	-17.99	.87	797	1125.6	165.0	-61.5
27.75	0.44	-0.12	-0.02	.31	.89	.77	851	1124.8	164.3	-62.0
28.00	0.49	-0.12	-0.02	.35	.83	.71	884	1124.1	163.7	-62.5
28.25	0.43	-0.13	-0.02	.28	.93	.81	826	1123.4	163.0	-63.1
28.50	0.40	-0.13	-0.02	.25	.98	.86	799	1122.7	162.3	-63.6
28.75	0.41	-0.13	-0.02	.26	.96	.84	809	1121.9	161.6	-64.1
29.00	0.38	-0.14	-0.02	.23	-18.02	.90	780	1121.2	160.9	-64.7
29.25	0.36	-0.14	-0.02	.20	.08	.96	749	1120.5	160.2	-65.2
29.50	0.33	-0.15	-0.02	.16	.17	-18.05	698	1119.7	159.5	-65.7
29.75	0.33	-0.15	-0.02	.16	.16	.05	700	1119.0	158.8	-66.2
30.00	0.38	-0.15	-0.02	.20	.06	-17.95	751	1118.3	158.1	-66.8
41130.50	0.45	-0.16	-0.02	.27	-17.92	-17.81	820	1116.8	156.7	-67.8
31.00	0.47	-0.17	-0.02	.28	.89	.79	831	1115.3	155.2	-68.9
31.50	0.49	-0.17	-0.02	.29	.86	.76	842	1113.9	153.8	-69.9
32.00	0.51	-0.18	-0.03	.30	.83	.74	852	1112.4	152.3	-70.9
32.50	0.49	-0.19	-0.03	.28	.86	.76	837	1111.0	150.8	-72.0
33.00	0.49	-0.20	-0.03	.27	.87	.78	829	1109.5	149.3	-73.0
33.50	0.50	-0.20	-0.03	.27	.86	.77	831	1108.1	147.7	-74.0
34.00	0.51	-0.21	-0.03	.27	.85	.76	833	1106.7	146.2	-75.0
34.50	0.52	-0.21	-0.03	.27	.84	.76	834	1105.3	144.6	-76.1
35.00	0.52	-0.22	-0.03	.27	.83	.75	835	1103.9	143.0	-77.1
35.50	0.52	-0.22	-0.03	.27	.83	.75	836	1102.6	141.3	-78.1
36.00	0.53	-0.23	-0.03	.26	.84	.76	828	1101.2	139.7	-79.1
36.50	0.53	-0.23	-0.03	.27	.82	.74	838	1099.9	138.0	-80.1
37.00	0.53	-0.24	-0.03	.26	.83	.75	830	1098.6	136.2	-81.1
37.50	0.53	-0.24	-0.03	.25	.83	.76	823	1097.3	134.4	-82.0
38.00	0.53	-0.25	-0.03	.25	.83	.75	825	1096.0	132.6	-83.0
38.50	0.54	-0.25	-0.03	.25	.82	.75	826	1094.8	130.7	-84.0
39.00	0.55	-0.26	-0.03	.26	.80	.73	837	1093.6	128.7	-84.9
39.50	0.55	-0.26	-0.03	.26	.79	.72	838	1092.4	126.7	-85.9
40.00	0.55	-0.26	-0.03	.25	.80	.74	830	1091.2	124.6	-86.8

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41140.50	0.55	-0.27	-0.03	.25	-17.80	-17.73	831	1090.1	122.5	-87.7
41.00	0.56	-0.27	-0.03	.25	.79	.73	832	1089.0	120.2	-88.6
41.50	0.56	-0.27	-0.03	.25	.78	.72	834	1087.9	117.9	-89.6
42.00	0.55	-0.27	-0.03	.24	.80	.74	825	1086.9	115.4	-90.4
42.50	0.55	-0.27	-0.03	.24	.80	.74	825	1085.9	112.8	-91.3
43.00	0.55	-0.27	-0.03	.24	.80	.74	826	1084.9	110.1	-92.2
43.50	0.55	-0.28	-0.03	.24	.79	.73	828	1084.0	107.2	-93.0
44.00	0.55	-0.28	-0.03	.24	.78	.73	829	1083.1	104.2	-93.8
44.50	0.56	-0.28	-0.03	.24	.78	.73	831	1082.3	100.9	-94.6
45.00	0.56	-0.27	-0.03	.25	.76	.71	842	1081.5	97.5	-95.4
45.50	0.56	-0.27	-0.03	.26	.73	.69	853	1080.7	93.8	-96.1
46.00	0.56	-0.27	-0.03	.26	.73	.68	854	1080.0	89.8	-96.8
46.50	0.58	-0.27	-0.03	.27	.71	.67	865	1079.3	85.5	-97.4
47.00	0.58	-0.26	-0.03	.28	.69	.65	876	1078.7	80.9	-98.0
47.50	0.58	-0.26	-0.03	.28	.69	.65	877	1078.1	76.0	-98.5
48.00	0.57	-0.25	-0.03	.28	.69	.65	879	1077.5	70.7	-99.0
48.50	0.56	-0.24	-0.03	.29	.67	.63	890	1077.0	65.1	-99.4
49.00	0.55	-0.24	-0.03	.29	.67	.63	891	1076.5	59.1	-99.7
49.50	0.54	-0.22	-0.03	.28	.68	.64	883	1076.1	52.9	-99.9
50.00	0.55	-0.21	-0.03	.30	.65	.61	902	1075.8	46.4	-100.0
50.50	0.56	-0.20	-0.03	.33	.61	.57	929	1075.4	39.8	-100.0
51.00	0.55	-0.18	-0.03	.34	.60	.56	938	1075.2	33.1	-99.9
51.50	0.52	-0.16	-0.03	.34	.60	.56	939	1075.0	26.5	-99.7
52.00	0.46	-0.12	-0.03	.30	.65	.62	905	1074.8	20.1	-99.4
52.50	0.40	-0.08	-0.03	.29	.67	.63	897	1074.7	13.9	-99.0
53.00	0.38	-0.02	-0.03	.33	.61	.58	933	1074.6	8.0	-98.5
53.50	0.42	0.00	-0.03	.39	.54	.51	982	1074.6	2.5	-98.0
54.00	0.45	0.00	-0.03	.42	.51	.48	1004	1074.6	357.3	-97.3
54.50	0.37	0.00	-0.03	.34	.61	.57	942	1074.7	352.4	-96.6
55.00	0.35	0.00	-0.03	.32	.64	.60	924	1074.8	347.9	-95.8
55.50	0.34	0.00	-0.03	.31	.66	.62	916	1075.0	343.7	-95.0
56.00	0.35	0.00	-0.03	.32	.64	.60	926	1075.3	339.8	-94.2
56.50	0.35	0.00	-0.03	.32	.65	.61	927	1075.6	336.2	-93.3
57.00	0.33	0.00	-0.03	.30	.68	.64	910	1075.9	332.8	-92.3
57.50	0.34	0.00	-0.03	.31	.67	.63	919	1076.3	329.6	-91.4
58.00	0.34	0.00	-0.02	.31	.67	.63	919	1076.8	326.7	-90.4
58.50	0.34	0.00	-0.02	.31	.68	.63	919	1077.3	323.8	-89.4
59.00	0.38	0.00	-0.02	.36	.61	.57	961	1077.8	321.2	-88.4
59.50	0.38	0.00	-0.02	.36	.62	.58	960	1078.5	318.6	-87.4
60.00	0.35	0.00	-0.02	.32	.68	.63	926	1079.1	316.2	-86.4
60.50	0.33	0.00	-0.02	.31	.70	.65	917	1079.8	313.9	-85.3
61.00	0.33	0.00	-0.02	.30	.72	.67	906	1080.6	311.7	-84.2
61.50	0.33	0.00	-0.02	.31	.72	.67	914	1081.4	309.6	-83.2
62.00	0.36	0.00	-0.02	.34	.68	.63	940	1082.3	307.5	-82.1
62.50	0.37	0.00	-0.02	.34	.68	.63	939	1083.3	305.6	-81.0
63.00	0.37	0.00	-0.02	.35	.68	.63	946	1084.2	303.6	-79.9
63.50	0.37	0.00	-0.02	.35	.69	.63	945	1085.3	301.8	-78.8
64.00	0.35	0.00	-0.02	.33	.72	.66	928	1086.3	300.0	-77.6
64.50	0.33	0.00	-0.02	.31	.76	.70	910	1087.5	298.2	-76.5
65.00	0.33	0.00	-0.02	.31	.76	.70	909	1088.7	296.5	-75.4
65.50	0.34	0.00	-0.02	.32	.75	.69	918	1089.9	294.8	-74.3
66.00	0.33	0.00	-0.02	.31	.78	.71	907	1091.2	293.2	-73.1
66.50	0.33	0.00	-0.01	.31	.79	.73	904	1092.5	291.6	-72.0
67.00	0.32	0.00	-0.01	.30	.82	.75	894	1093.9	290.0	-70.8
67.50	0.32	0.00	-0.01	.31	.81	.74	903	1095.3	288.5	-69.7
68.00	0.32	0.00	-0.01	.31	.81	.74	904	1096.8	287.0	-68.5
68.50	0.32	0.00	-0.01	.31	.82	.74	903	1098.3	285.5	-67.4
69.00	0.32	0.00	-0.01	.31	.84	.75	900	1099.8	284.0	-66.2
69.50	0.30	0.00	-0.01	.29	.88	.79	879	1101.4	282.6	-65.0
70.00	0.29	0.00	0.00	.28	.90	.82	870	1103.0	281.1	-63.9

Table 3 (cont.)

1963 53A (Explorer 19)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41170.50	0.29	0.00	0.00	.28	-17.91	-17.82	870	1104.7	279.7	-62.7
71.00	0.29	0.00	0.00	.29	.89	.80	881	1106.4	278.3	-61.5
71.50	0.29	0.00	0.00	.29	.90	.81	882	1108.1	276.9	-60.3
72.00	0.30	0.00	0.00	.30	.89	.80	890	1109.9	275.6	-59.2
72.50	0.30	0.00	0.00	.30	.90	.80	890	1111.7	274.2	-58.0
73.00	0.31	0.00	0.00	.31	.89	.79	900	1113.6	272.9	-56.8
73.50	0.30	0.00	0.00	.30	.91	.81	892	1115.4	271.5	-55.6
74.00	0.29	0.00	0.00	.29	.93	.83	883	1117.3	270.2	-54.4
74.50	0.29	0.00	0.01	.29	.94	.83	883	1119.3	268.9	-53.2
75.00	0.29	0.00	0.01	.29	.95	.84	882	1121.2	267.6	-52.0
75.50	0.28	0.00	0.01	.29	.96	.84	881	1123.2	266.3	-50.8
76.00	0.28	0.00	0.01	.29	.97	.85	880	1125.2	265.1	-49.6
76.50	0.27	0.00	0.01	.28	.99	.87	870	1127.2	263.8	-48.4
77.00	0.26	0.00	0.01	.27	-18.02	.89	861	1129.3	262.5	-47.2
77.50	0.25	0.00	0.01	.26	.04	.91	851	1131.3	261.3	-46.0
78.00	0.25	0.00	0.01	.26	.05	.92	850	1133.4	260.0	-44.8
78.50	0.25	0.00	0.01	.25	.07	.94	842	1135.5	258.8	-43.6
79.00	0.25	0.00	0.01	.26	.06	.92	853	1137.6	257.5	-42.4
79.50	0.25	0.00	0.01	.26	.06	.92	854	1139.7	256.3	-41.1
80.00	0.26	0.00	0.01	.26	.07	.93	853	1141.8	255.1	-39.9
80.50	0.25	0.00	0.01	.26	.08	.93	853	1143.9	253.9	-38.7
81.00	0.25	0.00	0.01	.25	.09	.94	845	1146.1	252.7	-37.5
81.50	0.25	0.00	0.01	.25	.10	.94	846	1148.2	251.4	-36.3
82.00	0.24	0.00	0.01	.24	.12	.97	836	1150.3	250.2	-35.0
82.50	0.24	0.00	0.00	.24	.14	.97	836	1152.5	249.0	-33.8
83.00	0.24	0.00	0.00	.24	.15	.98	835	1154.6	247.8	-32.6
83.50	0.24	0.00	0.00	.25	.13	.96	845	1156.7	246.6	-31.3
84.00	0.24	0.01	0.00	.26	.12	.95	857	1158.8	245.4	-30.1
84.50	0.25	0.01	0.00	.27	.10	.93	868	1160.9	244.3	-28.9
85.00	0.26	0.02	0.00	.28	.09	.91	878	1163.0	243.1	-27.6
85.50	0.26	0.02	0.00	.28	.09	.92	879	1165.1	241.9	-26.4
86.00	0.25	0.02	0.00	.28	.09	.92	879	1167.1	240.7	-25.2
86.50	0.24	0.03	0.00	.27	.11	.93	870	1169.2	239.5	-23.9
87.00	0.23	0.03	0.00	.26	.14	.95	860	1171.2	238.4	-22.7
87.50	0.22	0.03	0.00	.25	.16	.97	850	1173.2	237.2	-21.5
88.00	0.23	0.03	0.00	.26	.15	.96	860	1175.2	236.0	-20.2
88.50	0.23	0.02	0.00	.26	.15	.96	860	1177.1	234.8	-19.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38425.00	11.54	0.00	-0.05	11.49	-17.72	-17.85	809	1138.5	180.2	99.1
25.50	11.33	0.00	-0.08	11.25	.86	.85	807	1137.9	169.4	99.1
26.00	9.28	0.00	-0.10	9.18	.94	.93	757	1137.3	158.9	98.7
26.50	7.22	0.00	-0.13	7.09	-18.06	-18.05	685	1136.6	149.0	98.2
27.00	7.45	0.00	-0.15	7.30	.05	.04	701	1135.9	140.1	97.4
27.50	7.66	0.00	-0.18	7.48	.04	.03	707	1135.3	132.4	96.5
28.00	7.86	0.00	-0.20	7.66	.04	.03	719	1134.5	125.6	95.5
28.50	7.60	0.00	-0.23	7.37	.07	.06	711	1133.8	119.8	94.4
29.00	7.79	0.00	-0.26	7.53	.05	.05	716	1133.1	114.7	93.2
29.50	7.73	0.00	-0.28	7.45	.04	.03	709	1132.3	110.3	92.0
30.00	8.59	0.00	-0.30	8.29	-17.99	-17.99	739	1131.6	106.3	90.7
30.50	9.43	-0.12	-0.32	9.00	.96	.96	762	1130.8	102.8	89.4
31.00	11.18	-0.31	-0.34	10.54	.88	.88	803	1130.0	99.7	88.1
31.50	11.10	-0.51	-0.36	10.23	.88	.88	797	1129.2	96.8	86.8
32.00	10.77	-0.68	-0.38	9.71	.90	.90	785	1128.4	94.1	85.4
32.50	10.66	-0.89	-0.40	9.37	.92	.92	779	1127.6	91.7	84.1
33.00	10.55	-1.12	-0.42	8.94	.94	.95	767	1126.8	89.4	82.7
33.50	11.33	-1.49	-0.43	9.42	.92	.93	783	1125.9	87.3	81.4
34.00	12.11	-1.79	-0.44	9.88	.89	.90	797	1125.1	85.3	80.0
34.50	12.65	-2.11	-0.44	10.10	.88	.89	804	1124.3	83.4	78.6
35.00	12.04	-2.37	-0.45	9.22	.92	.94	783	1123.5	81.5	77.3
35.50	11.42	-2.69	-0.46	8.27	.98	.99	756	1122.7	79.8	75.9
36.00	11.70	-2.97	-0.46	8.26	.98	.99	757	1121.9	78.1	74.6
36.50	12.42	-3.26	-0.47	8.69	.96	.98	773	1121.0	76.5	73.3
37.00	14.06	-3.49	-0.48	10.08	.90	.92	810	1120.2	75.0	71.9
37.50	15.91	-3.71	-0.48	11.72	.82	.84	852	1119.4	73.4	70.6
38.00	17.29	-3.92	-0.48	12.89	.77	.79	881	1118.6	72.0	69.3
38.50	17.06	-4.12	-0.49	12.45	.78	.80	874	1117.8	70.5	68.0
39.00	16.48	-4.28	-0.49	11.71	.81	.83	859	1117.1	69.1	66.6
39.50	15.20	-4.46	-0.49	10.25	.87	.89	825	1116.3	67.8	65.3
40.00	15.17	-4.59	-0.49	10.09	.88	.90	823	1115.5	66.4	64.1
40.50	15.35	-4.76	-0.48	10.11	.88	.91	824	1114.8	65.1	62.8
41.00	15.29	-4.87	-0.48	9.94	.89	.92	821	1114.0	63.8	61.5
41.50	14.77	-4.99	-0.48	9.30	.92	.95	805	1113.3	62.6	60.2
42.00	15.15	-5.09	-0.48	9.58	.91	.93	815	1112.6	61.3	59.0
42.50	15.52	-5.16	-0.47	9.89	.89	.92	825	1111.9	60.1	57.7
43.00	15.88	-5.23	-0.46	10.19	.88	.91	834	1111.2	58.9	56.5
43.50	16.45	-5.31	-0.45	10.69	.85	.89	849	1110.5	57.7	55.2
44.00	16.55	-5.36	-0.44	10.75	.85	.88	853	1109.9	56.5	54.0
44.50	16.87	-5.42	-0.43	11.03	.84	.88	861	1109.2	55.3	52.8
45.00	17.41	-5.48	-0.42	11.51	.82	.86	874	1108.6	54.2	51.6
45.50	17.71	-5.51	-0.41	11.79	.81	.84	883	1108.0	53.0	50.3
46.00	17.54	-5.52	-0.40	11.62	.80	.84	879	1107.4	51.9	49.2
46.50	16.67	-5.52	-0.38	10.77	.84	.87	857	1106.8	50.7	48.0
47.00	16.01	-5.52	-0.37	10.12	.87	.90	845	1106.3	49.6	46.8
47.50	15.35	-5.51	-0.35	9.49	.89	.93	830	1105.8	48.5	45.6
48.00	14.67	-5.51	-0.34	8.82	.92	.96	810	1105.2	47.4	44.5
48.50	14.89	-5.47	-0.32	9.10	.91	.95	821	1104.7	46.3	43.3
49.00	15.33	-5.42	-0.30	9.62	.88	.93	839	1104.3	45.2	42.2
49.50	18.50	-5.36	-0.28	12.86	.75	.80	924	1103.8	44.1	41.0
50.00	19.14	-5.31	-0.27	13.56	.73	.77	941	1103.3	43.1	39.9
50.50	18.86	-5.24	-0.25	13.37	.73	.78	938	1102.9	42.0	38.8
51.00	18.10	-5.17	-0.23	12.70	.76	.80	920	1102.5	40.9	37.6
51.50	17.79	-5.10	-0.21	12.48	.77	.81	914	1102.2	39.9	36.5
52.00	17.24	-4.99	-0.19	12.06	.78	.83	906	1101.8	38.8	35.4
52.50	16.44	-4.91	-0.16	11.38	.80	.85	892	1101.5	37.8	34.3
53.00	16.55	-4.81	-0.14	11.60	.80	.84	897	1101.1	36.7	33.2
53.50	16.18	-4.72	-0.12	11.35	.81	.85	886	1100.8	35.7	32.1
54.00	15.58	-4.62	-0.09	10.87	.83	.87	876	1100.6	34.6	31.1
54.50	15.41	-4.52	-0.07	10.82	.83	.88	878	1100.3	33.6	30.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38455.00	15.01	-4.42	-0.04	10.55	-17.84	-17.89	871	1100.1	32.6	28.9
55.50	15.04	-4.27	-0.01	10.76	.84	.89	877	1099.9	31.5	27.8
56.00	15.29	-4.16	0.02	11.15	.83	.88	886	1099.7	30.5	26.8
38461.00	12.95	-2.74	0.34	10.55	-17.87	-17.92	847	1099.0	20.4	16.3
62.00	12.75	-2.42	0.41	10.74	.86	.91	852	1099.1	18.4	14.2
63.00	12.42	-2.09	0.48	10.81	.86	.91	852	1099.2	16.4	12.1
64.00	12.25	-1.73	0.54	11.06	.86	.91	862	1099.5	14.4	10.0
65.00	11.59	-1.38	0.60	10.81	.87	.92	853	1099.9	12.4	7.8
66.00	11.09	-1.00	0.67	10.76	.87	.92	847	1100.3	10.4	5.7
67.00	10.45	-0.64	0.73	10.54	.88	.93	840	1100.8	8.4	3.6
68.00	10.52	-0.32	0.79	10.99	.87	.91	854	1101.4	6.4	1.4
69.00	10.45	0.05	0.86	11.37	.85	.90	862	1102.0	4.4	-0.7
70.00	9.79	0.40	0.92	11.11	.86	.91	851	1102.7	2.4	-2.8
71.00	8.87	0.74	0.98	10.59	.89	.93	833	1103.5	0.4	-5.0
72.00	8.26	1.07	1.03	10.36	.91	.95	826	1104.3	358.4	-7.1
73.00	7.80	1.47	1.09	10.35	.91	.96	825	1105.2	356.4	-9.3
74.00	7.64	1.81	1.14	10.56	.91	.95	826	1106.2	354.4	-11.4
75.00	7.28	2.12	1.19	10.59	.91	.95	819	1107.2	352.4	-13.6
76.00	7.11	2.45	1.24	10.80	.90	.94	817	1108.3	350.3	-15.7
77.00	7.94	2.76	1.28	11.98	.86	.89	841	1109.4	348.3	-17.8
78.00	8.21	3.05	1.32	12.58	.84	.87	853	1110.5	346.3	-20.0
79.00	6.90	3.30	1.36	11.57	.88	.91	827	1111.7	344.3	-22.1
80.00	5.50	3.55	1.40	10.45	.93	.96	789	1112.9	342.2	-24.3
81.00	5.49	3.82	1.43	10.74	.93	.95	801	1114.2	340.2	-26.4
82.00	5.43	4.06	1.46	10.95	.93	.96	807	1115.4	338.1	-28.6
83.00	5.44	4.29	1.48	11.21	.93	.95	811	1116.7	336.1	-30.8
84.00	5.30	4.48	1.51	11.29	.92	.94	806	1118.0	334.0	-32.9
85.00	5.22	4.66	1.52	11.40	.91	.93	804	1119.3	331.9	-35.1
38485.50	5.27	4.78	1.52	11.57	-17.91	-17.93	811	1120.0	330.8	-36.2
86.00	4.99	4.86	1.52	11.37	.92	.94	807	1120.6	329.8	-37.3
86.50	5.84	4.91	1.52	12.27	.89	.90	824	1121.3	328.7	-38.4
87.00	8.30	4.99	1.52	14.81	.79	.81	869	1121.9	327.7	-39.5
87.50	6.42	5.01	1.52	12.95	.85	.86	820	1122.6	326.6	-40.6
88.00	6.37	5.09	1.52	12.97	.86	.87	828	1123.2	325.5	-41.8
88.50	5.86	4.55	1.51	11.91	.90	.91	798	1123.9	324.4	-42.9
89.00	5.35	5.18	1.50	12.04	.89	.90	803	1124.5	323.3	-44.0
89.50	3.71	5.20	1.50	10.41	.96	.97	758	1125.2	322.2	-45.2
38490.00	4.23	5.21	1.48	10.93	-17.94	-17.95	776	1125.8	321.1	-46.3
91.00	4.54	5.29	1.46	11.29	.93	.94	785	1127.0	318.9	-48.6
92.00	4.52	5.30	1.44	11.26	.93	.94	781	1128.2	316.6	-51.0
93.00	5.00	5.31	1.42	11.73	.91	.91	788	1129.4	314.2	-53.4
94.00	5.26	5.30	1.39	11.95	.90	.90	791	1130.6	311.8	-55.9
95.00	5.01	5.24	1.36	11.60	.92	.92	783	1131.7	309.3	-58.4
96.00	4.24	5.15	1.32	10.71	.96	.95	760	1132.8	306.6	-61.0
97.00	3.81	4.99	1.28	10.08	.98	.98	741	1133.8	303.9	-63.7
38498.00	3.76	4.86	1.23	9.85	-17.99	-17.98	738	1134.8	300.8	-66.8
98.50	3.79	4.78	1.20	9.77	.99	.99	735	1135.2	299.2	-68.2
99.00	3.82	4.67	1.18	9.67	-18.00	.99	731	1135.7	297.6	-69.6
99.50	4.30	4.58	1.15	10.02	-17.98	.97	739	1136.1	295.9	-71.0
38500.00	4.54	4.47	1.12	10.13	.98	.97	744	1136.5	294.2	-72.5
00.50	5.00	4.35	1.10	10.45	.96	.95	749	1136.9	292.3	-73.9
01.00	4.76	4.22	1.06	10.04	.97	.96	730	1137.3	290.4	-75.3
01.50	5.21	4.05	1.04	10.29	.96	.94	738	1137.7	288.3	-76.7
02.00	4.73	3.91	1.00	9.64	.98	.97	717	1138.1	286.1	-78.2
02.50	4.70	3.74	0.98	9.42	.99	.97	698	1138.4	283.7	-79.6

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38503.00	4.67	3.57	0.96	9.19	-18.00	-17.99	699	1138.8	281.1	-81.1
03.50	4.85	3.40	0.91	9.16	.00	.98	691	1139.1	278.3	-82.5
04.00	5.03	3.22	0.88	9.13	-17.99	.97	675	1139.4	275.2	-83.9
04.50	5.66	3.04	0.85	9.55	.97	.95	673	1139.7	271.7	-85.3
05.00	6.28	2.86	0.82	9.96	.95	.93	716	1139.9	267.7	-86.7
05.50	6.90	2.65	0.78	10.33	.94	.92	736	1140.2	263.2	-88.1
06.00	7.50	2.44	0.75	10.70	.92	.90	747	1140.4	257.9	-89.4
06.50	6.51	2.23	0.72	9.46	.98	.96	712	1140.6	251.8	-90.6
07.00	6.42	2.00	0.68	9.10	-18.00	.98	709	1140.8	244.7	-91.7
07.50	6.33	1.75	0.65	8.73	.02	-18.00	701	1141.0	236.3	-92.7
08.00	6.46	1.53	0.62	8.61	.03	.01	699	1141.2	226.7	-93.5
08.50	6.35	1.31	0.58	8.24	.04	.03	686	1141.3	216.0	-94.0
09.00	6.24	1.09	0.55	7.88	.07	.05	673	1141.5	204.6	-94.3
09.50	5.44	0.88	0.52	6.84	.12	.11	617	1141.6	193.2	-94.3
10.00	5.77	0.67	0.48	6.92	.11	.09	624	1141.7	182.4	-94.0
10.50	6.79	0.50	0.44	7.73	.06	.04	639	1141.7	172.7	-93.5
11.00	8.48	0.31	0.41	9.20	-17.97	-17.95	703	1141.8	164.3	-92.8
11.50	8.80	0.12	0.38	9.30	.97	.95	710	1141.8	157.1	-91.9
12.00	10.49	0.00	0.34	10.83	.90	.88	757	1141.9	150.9	-90.9
12.50	12.63	0.00	0.31	12.94	.82	.80	801	1141.9	145.6	-89.8
13.00	10.20	0.00	0.28	10.48	.90	.88	732	1141.9	141.0	-88.6
13.50	9.59	0.00	0.24	9.83	.92	.90	687	1141.9	137.0	-87.4
14.00	8.98	0.00	0.20	9.18	.96	.94	674	1141.8	133.4	-86.1
14.50	7.68	0.00	0.17	7.85	-18.03	-18.01	657	1141.8	130.2	-84.8
15.00	7.51	0.00	0.13	7.64	.06	.04	637	1141.7	127.4	-83.5
15.50	8.03	0.00	0.10	8.13	.03	.02	685	1141.6	124.7	-82.1
16.00	8.32	0.00	0.06	8.38	.01	-17.99	651	1141.5	122.3	-80.7
16.50	9.97	0.00	0.03	10.00	-17.92	.90	731	1141.4	120.1	-79.4
17.00	9.79	0.00	0.00	9.79	.94	.92	736	1141.3	118.0	-77.9
17.50	9.39	0.00	-0.04	9.35	.96	.94	726	1141.2	116.0	-76.5
18.00	9.20	0.00	-0.06	9.14	.98	.96	722	1141.0	114.2	-75.1
18.50	9.25	0.00	-0.10	9.15	.98	.97	728	1140.9	112.4	-73.7
19.00	8.83	0.00	-0.13	8.70	-18.01	.99	718	1140.7	110.7	-72.3
19.50	8.42	0.00	-0.16	8.26	.03	-18.01	706	1140.5	109.0	-70.9
20.00	8.46	0.00	-0.19	8.27	.03	.01	707	1140.3	107.4	-69.5
20.50	8.26	0.00	-0.22	8.04	.03	.01	691	1140.1	105.9	-68.1
21.00	8.07	0.00	-0.25	7.82	.05	.03	693	1139.9	104.4	-66.6
21.50	7.88	0.00	-0.28	7.60	.06	.05	694	1139.6	103.0	-65.2
22.00	8.14	0.00	-0.32	7.82	.05	.03	702	1139.4	101.6	-63.9
22.50	8.17	0.00	-0.34	7.83	.05	.03	706	1139.2	100.2	-62.5
23.00	8.20	0.00	-0.38	7.82	.06	.04	711	1138.9	98.9	-61.1
23.50	8.68	0.00	-0.40	8.28	.03	.02	730	1138.6	97.5	-59.7
24.00	9.16	0.00	-0.43	8.73	.01	.00	745	1138.4	96.2	-58.4
24.50	9.42	0.00	-0.46	8.96	.00	-17.98	755	1138.1	95.0	-57.0
25.00	9.22	0.00	-0.49	8.73	.00	.99	750	1137.8	93.7	-55.7
25.50	9.25	0.00	-0.52	8.73	-17.99	.98	749	1137.5	92.5	-54.4
26.00	9.96	0.00	-0.54	9.42	.95	.94	759	1137.2	91.2	-53.1
26.50	10.67	0.00	-0.57	10.10	.92	.91	788	1136.9	90.0	-51.8
27.00	9.55	0.00	-0.59	8.96	.99	.98	766	1136.7	88.8	-50.6
27.50	7.76	0.00	-0.62	7.14	-18.09	-18.08	703	1136.3	87.7	-49.3
28.00	7.33	0.00	-0.64	6.69	.13	.12	688	1136.0	86.5	-48.1
28.50	7.81	0.00	-0.66	7.15	.09	.08	704	1135.7	85.3	-46.9
29.00	8.76	0.00	-0.69	8.07	.03	.02	727	1135.4	84.2	-45.7
29.50	10.16	0.01	-0.72	9.45	-17.96	-17.95	779	1135.1	83.0	-44.5
30.00	13.15	0.01	-0.74	12.42	.84	.83	868	1134.8	81.9	-43.3
30.50	11.82	0.01	-0.76	11.07	.89	.89	838	1134.5	80.8	-42.2
31.00	9.57	-0.01	-0.78	8.78	.99	.99	762	1134.2	79.6	-41.0
31.50	9.15	-0.05	-0.80	8.30	-18.02	-18.01	736	1133.9	78.5	-39.9
32.00	8.28	-0.18	-0.82	7.28	.08	.08	692	1133.6	77.4	-38.8
32.50	8.32	-0.29	-0.85	7.18	.09	.08	683	1133.3	76.3	-37.8

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38533.00	8.59	-0.54	-0.86	7.18	-18.09	-18.09	718	1133.0	75.2	-36.7
33.50	8.86	-0.96	-0.88	7.02	.10	.10	721	1132.7	74.1	-35.7
34.00	9.59	-1.38	-0.90	7.31	.09	.09	746	1132.4	73.0	-34.7
34.50	9.87	-1.75	-0.91	7.20	.10	.10	747	1132.2	72.0	-33.7
35.00	10.83	-2.12	-0.92	7.79	.07	.06	775	1131.9	70.9	-32.7
35.50	11.57	-2.25	-0.94	8.38	.04	.03	798	1131.6	69.8	-31.7
36.00	11.86	-2.43	-0.95	8.47	.04	.03	803	1131.4	68.7	-30.7
36.50	11.46	-2.56	-0.96	7.94	.07	.06	785	1131.1	67.6	-29.8
37.00	10.84	-2.71	-0.97	7.16	.11	.11	751	1130.8	66.6	-28.8
37.50	10.00	-2.81	-0.98	6.20	.18	.18	670	1130.6	65.5	-27.9
38.00	9.84	-2.89	-0.99	5.96	.20	.19	674	1130.4	64.5	-27.0
38.50	10.11	-2.97	-1.00	6.14	.19	.19	679	1130.2	62.9	-22.8
39.00	10.06	-3.02	-1.02	6.02	.20	.20	695	1129.9	61.8	-21.9
39.50	10.46	-3.05	-1.02	6.39	.17	.18	723	1129.7	60.8	-21.0
40.00	11.77	-3.06	-1.02	7.69	.10	.10	765	1129.6	59.7	-20.2
40.50	13.76	-3.04	-1.03	9.69	.00	.00	855	1129.4	58.7	-19.3
41.00	13.25	-3.04	-1.04	9.17	.02	.02	833	1129.2	57.6	-18.4
41.50	11.13	-3.03	-1.04	7.07	.14	.14	748	1129.0	56.6	-17.5
42.00	11.07	-3.02	-1.05	7.01	.15	.15	767	1128.9	55.5	-16.7
42.50	10.78	-2.99	-1.05	6.74	.16	.17	708	1128.8	54.4	-15.8
43.00	10.95	-2.96	-1.06	6.93	.15	.16	732	1128.6	53.4	-15.0
43.50	10.43	-2.92	-1.06	6.45	.19	.19	706	1128.5	52.3	-14.2
44.00	10.59	-2.87	-1.06	6.66	.18	.18	735	1128.4	51.3	-13.3
44.50	10.07	-2.81	-1.06	6.19	.21	.21	700	1128.4	50.2	-12.5
45.00	9.77	-2.76	-1.06	5.95	.23	.23	694	1128.3	49.2	-11.7
45.50	9.70	-2.68	-1.07	5.95	.23	.23	698	1128.2	48.1	-10.8
46.00	10.31	-2.61	-1.07	6.63	.19	.19	759	1128.2	47.0	-10.0
46.50	10.23	-2.52	-1.07	6.65	.19	.19	765	1128.2	46.0	-9.2
47.00	10.61	-2.41	-1.06	7.14	.16	.17	804	1128.2	44.9	-8.4
47.50	10.30	-2.30	-1.06	6.94	.18	.18	793	1128.2	43.9	-7.6
48.00	9.54	-2.16	-1.06	6.32	.22	.22	747	1128.2	42.8	-6.8
48.50	9.45	-2.05	-1.05	6.35	.22	.23	757	1128.2	41.7	-6.0
49.00	8.91	-1.95	-1.04	5.91	.26	.26	685	1128.3	40.7	-5.2
49.50	8.59	-1.85	-1.04	5.70	.27	.28	699	1128.4	39.6	-4.4
50.00	8.49	-1.73	-1.03	5.73	.28	.28	684	1128.5	38.5	-3.6
50.50	7.94	-1.61	-1.02	5.30	.31	.31	703	1128.6	37.5	-2.8
51.00	7.84	-1.51	-1.01	5.32	.31	.31	703	1128.7	36.4	-2.0
51.50	7.73	-1.38	-1.00	5.35	.31	.31	699	1128.8	35.3	-1.2
52.00	7.85	-1.27	-0.99	5.58	.30	.30	686	1129.0	34.3	-0.4
52.50	8.19	-1.17	-0.98	6.04	.27	.27	750	1129.1	33.2	0.4
53.00	8.30	-1.06	-0.96	6.28	.25	.25	775	1129.3	32.1	1.2
53.50	7.73	-0.93	-0.96	5.83	.29	.29	749	1129.5	31.0	2.0
54.00	8.06	-0.82	-0.94	6.30	.25	.26	762	1129.8	30.0	2.7
54.50	8.15	-0.69	-0.93	6.53	.24	.24	745	1130.0	28.9	3.5
55.00	8.48	-0.55	-0.92	7.00	.21	.21	812	1130.2	27.8	4.3
55.50	8.34	-0.42	-0.90	7.01	.22	.22	813	1130.5	26.7	5.1
56.00	11.61	-0.30	-0.89	10.42	.05	.05	947	1130.8	25.6	5.9
56.50	13.06	-0.16	-0.88	12.02	-17.99	-17.99	986	1131.1	24.5	6.7
57.00	9.26	0.00	-0.86	8.40	-18.15	-18.15	838	1131.4	23.4	7.4
57.50	8.64	0.12	-0.85	7.91	.18	.18	833	1131.8	22.4	8.2
58.00	8.25	0.29	-0.83	7.70	.19	.19	834	1132.1	21.3	9.0
58.50	7.39	0.42	-0.82	7.00	.23	.23	795	1132.5	20.2	9.8
59.00	7.21	0.57	-0.80	6.99	.24	.23	806	1132.9	19.0	10.6
59.50	7.03	0.74	-0.80	6.97	.24	.24	812	1133.3	17.9	11.3
60.00	6.16	0.85	-0.78	6.23	.29	.29	750	1133.7	16.8	12.1
60.50	5.28	0.98	-0.78	5.48	.35	.35	727	1134.1	15.7	12.9
61.00	4.85	1.09	-0.76	5.18	.38	.37	730	1134.5	14.6	13.7
61.50	4.41	1.25	-0.75	4.92	.40	.40	726	1135.0	13.5	14.4
62.00	4.20	1.37	-0.74	4.83	.41	.40	718	1135.4	12.4	15.2
62.50	3.98	1.49	-0.72	4.74	.42	.41	717	1135.9	11.2	16.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38563.00	4.66	1.61	-0.71	5.57	-18.35	-18.35	748	1136.4	10.1	16.8
63.50	4.65	1.74	-0.69	5.71	.35	.34	755	1136.9	9.0	17.5
64.00	4.64	1.87	-0.68	5.83	.34	.33	777	1137.4	7.8	18.3
64.50	4.62	2.00	-0.66	5.96	.33	.32	785	1137.9	6.7	19.1
65.00	4.36	2.12	-0.64	5.85	.34	.33	752	1138.5	5.5	19.9
65.50	4.33	2.23	-0.62	5.94	.34	.33	784	1139.0	4.4	20.6
66.00	4.74	2.36	-0.60	6.49	.30	.29	818	1139.5	3.2	21.4
66.50	3.32	2.46	-0.58	5.20	.41	.39	752	1140.1	2.0	22.2
67.00	3.26	2.57	-0.56	5.27	.40	.39	757	1140.6	0.9	23.0
67.50	2.96	2.72	-0.54	5.14	.41	.40	748	1141.2	359.7	23.7
68.00	2.86	2.85	-0.52	5.21	.41	.39	730	1141.8	358.5	24.5
38569.00	3.03	2.65	-0.48	5.20	-18.41	-18.39	726	1142.9	356.8	24.0
70.00	2.79	2.87	-0.44	5.21	.41	.39	725	1144.1	354.4	25.6
71.00	2.67	3.08	-0.40	5.35	.41	.39	733	1145.3	352.0	27.1
72.00	1.20	3.30	-0.36	4.15	.52	.50	736	1146.5	349.5	28.7
73.00	0.71	3.50	-0.32	3.90	.55	.53	722	1147.6	347.0	30.3
74.00	0.75	3.71	-0.28	4.18	.52	.50	728	1148.8	344.4	31.9
75.00	1.32	3.87	-0.24	4.94	.45	.43	736	1150.0	341.8	33.6
76.00	1.44	4.02	-0.22	5.25	.43	.40	734	1151.2	339.1	35.2
77.00	-0.30	4.15	-0.18	3.67	.58	.55	714	1152.3	336.3	36.8
78.00	-0.60	4.27	-0.16	3.51	.60	.57	712	1153.5	333.4	38.5
79.00	-0.77	4.40	-0.13	3.50	.61	.58	727	1154.6	330.4	40.2
80.00	-0.23	4.51	-0.10	4.18	.54	.50	747	1155.7	327.2	41.9
81.00	-0.42	4.62	-0.07	4.13	.54	.51	732	1156.8	323.9	43.6
82.00	-0.48	4.72	-0.04	4.19	.53	.50	721	1157.8	320.3	45.3
83.00	-0.52	4.80	-0.02	4.26	.53	.49	731	1158.9	316.5	47.0
84.00	-0.54	4.89	0.01	4.36	.52	.49	753	1159.8	312.3	48.7
85.00	-0.99	4.91	0.02	3.94	.57	.53	759	1160.8	307.7	50.4
86.00	-1.08	4.92	0.05	3.89	.57	.53	755	1161.7	302.5	52.1
87.00	-1.09	4.92	0.07	3.90	.57	.53	739	1162.6	296.5	53.7
88.00	-1.08	4.91	0.08	3.91	.56	.52	721	1163.5	289.6	55.3
89.00	-1.10	4.89	0.10	3.89	.56	.52	724	1164.3	281.3	56.7
90.00	-1.32	4.85	0.12	3.65	.59	.55	719	1165.0	271.3	58.1
91.00	-1.29	4.81	0.13	3.65	.59	.55	705	1165.8	259.4	59.2
92.00	-1.01	4.76	0.14	3.88	.56	.52	706	1166.4	245.5	59.9
93.00	-0.25	4.66	0.15	4.56	.50	.45	729	1167.1	230.3	60.3
94.00	1.45	4.53	0.16	6.14	.38	.33	829	1167.6	215.1	60.1
95.00	0.04	4.36	0.16	4.57	.50	.46	753	1168.1	201.1	59.6
96.00	-0.88	4.23	0.17	3.52	.61	.57	740	1168.6	189.0	58.7
97.00	-0.75	4.05	0.18	3.48	.61	.57	726	1169.0	179.0	57.4
98.00	0.04	3.83	0.18	4.06	.54	.50	723	1169.3	170.6	56.0
99.00	1.09	3.57	0.18	4.84	.47	.42	726	1169.6	163.6	54.4
38600.00	0.97	3.27	0.19	4.43	.50	.46	712	1169.8	157.6	52.7
01.00	0.82	2.95	0.19	3.97	.55	.50	707	1170.0	152.3	50.8
02.00	1.79	2.57	0.20	4.56	.49	.44	741	1170.1	147.6	48.9
03.00	2.81	1.95	0.20	4.96	.45	.40	795	1170.2	143.4	46.8
04.00	4.33	1.14	0.20	5.67	.39	.34	844	1170.2	139.5	44.6
05.00	5.63	0.49	0.21	6.33	.34	.30	868	1170.1	135.9	42.5
06.00	5.74	0.00	0.20	5.94	.38	.33	827	1170.0	132.6	40.3
07.00	5.16	0.00	0.20	5.36	.42	.37	769	1169.9	129.6	38.2
08.00	5.05	0.00	0.19	5.24	.43	.38	783	1169.7	126.7	36.0
09.00	5.50	0.00	0.18	5.68	.38	.34	825	1169.5	123.9	33.9
10.00	5.84	0.00	0.16	6.00	.36	.31	841	1169.2	121.2	31.8
11.00	6.64	0.00	0.14	6.78	.31	.26	862	1168.9	118.6	29.7
12.00	6.02	0.00	0.12	6.14	.35	.30	811	1168.6	116.1	27.5
13.00	5.11	0.00	0.09	5.20	.42	.37	723	1168.3	113.6	25.4
14.00	6.02	0.00	0.06	6.08	.34	.30	820	1167.9	111.2	23.3

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38616.00	5.76	0.00	0.02	5.78	-18.35	-18.31	806	1167.2	106.5	19.0
18.00	6.03	0.00	-0.01	6.02	.32	.28	808	1166.4	102.0	14.8
20.00	6.58	0.00	0.02	6.60	.27	.22	838	1165.5	97.6	10.6
22.00	6.42	0.00	0.09	6.51	.25	.21	842	1164.7	93.2	6.5
24.00	6.48	0.00	0.16	6.64	.23	.18	847	1163.9	89.0	2.5
26.00	6.76	0.00	0.24	7.00	.19	.14	858	1163.1	84.8	-1.3
28.00	6.68	0.00	0.28	6.96	.18	.13	853	1162.4	80.6	-4.8
30.00	6.39	0.00	0.29	6.68	.18	.13	838	1161.7	76.5	-8.2
38631.00	6.14	0.00	0.28	6.42	-18.19	-18.15	826	1161.3	74.5	-9.8
32.00	6.97	0.00	0.26	7.23	.13	.09	858	1161.0	72.5	-11.3
33.00	7.81	0.00	0.23	8.04	.08	.03	885	1160.7	70.5	-12.7
34.00	7.50	0.00	0.23	7.73	.09	.04	871	1160.4	68.5	-14.1
35.00	6.45	0.00	0.24	6.69	.15	.10	828	1160.2	66.6	-15.4
36.00	6.30	0.00	0.25	6.55	.16	.11	822	1159.9	64.6	-16.6
37.00	6.90	0.00	0.26	7.16	.11	.07	845	1159.7	62.6	-17.7
38.00	7.88	0.00	0.28	8.16	.05	.00	881	1159.5	60.7	-18.8
39.00	9.15	0.00	0.30	9.45	-17.97	-17.93	923	1159.4	58.8	-19.9
40.00	7.22	0.00	0.32	7.54	-18.06	-18.02	852	1159.2	56.8	-20.9
41.00	6.83	0.11	0.34	7.27	.08	.03	842	1159.1	54.9	-21.8
42.00	6.83	0.29	0.37	7.48	.06	.02	849	1159.1	53.0	-22.7
43.00	7.26	0.50	0.40	8.15	.03	-17.98	871	1159.0	51.1	-23.2
44.00	7.67	0.70	0.43	8.80	-17.99	.95	892	1159.0	49.2	-24.2
45.00	7.78	0.88	0.46	9.12	.97	.93	899	1159.1	47.2	-25.1
46.00	7.46	1.04	0.50	9.00	.97	.93	888	1159.2	45.3	-26.2
47.00	6.42	1.16	0.53	8.11	-18.02	.97	852	1159.3	43.3	-27.2
48.00	6.55	1.25	0.57	8.37	.01	.96	864	1159.4	41.4	-28.3
49.00	6.42	1.32	0.60	8.34	.01	.96	863	1159.6	39.4	-29.2
50.00	6.26	1.40	0.64	8.30	.02	.97	860	1159.8	37.4	-30.2
51.00	5.96	1.48	0.67	8.10	.03	.98	850	1160.0	35.5	-31.1
52.00	5.62	1.54	0.70	7.86	.05	-18.00	839	1160.3	33.5	-31.9
53.00	5.54	1.58	0.72	7.84	.05	.00	834	1160.6	31.6	-32.6
54.00	5.99	1.65	0.76	8.40	.02	-17.97	849	1160.9	29.7	-33.2
55.00	6.18	1.71	0.78	8.67	.00	.96	851	1161.2	27.8	-33.7
56.00	5.37	1.71	0.81	7.89	.05	-18.00	816	1161.6	25.9	-34.2
57.00	4.81	1.71	0.84	7.36	.09	.04	793	1161.9	24.0	-34.6
58.00	4.28	1.72	0.86	6.86	.13	.08	770	1162.3	22.2	-34.9
38658.50	3.82	1.72	0.87	6.41	-18.17	-18.11	746	1162.5	21.2	-35.0
59.00	4.05	1.73	0.88	6.66	.15	.10	756	1162.7	20.3	-35.1
59.50	4.06	1.73	0.89	6.68	.15	.09	750	1162.9	19.4	-35.2
60.00	5.89	1.73	0.90	8.52	.03	-17.98	821	1163.1	18.5	-35.3
60.50	9.55	1.72	0.91	12.19	-17.87	.82	930	1163.3	17.5	-35.4
61.00	7.07	1.71	0.92	9.70	.08	.93	860	1163.5	16.6	-35.5
61.50	5.73	1.70	0.92	8.35	-18.05	-18.00	812	1163.7	15.7	-35.5
62.00	4.40	1.68	0.94	7.02	.13	.07	741	1163.9	14.8	-35.6
62.50	4.21	1.67	0.94	6.82	.14	.09	687	1164.1	13.9	-35.6
38663.00	4.54	1.67	0.65	6.85	-18.14	-18.09	705	1164.3	13.0	-35.6
64.00	4.53	1.62	0.66	6.81	.15	.10	716	1164.7	11.1	-35.7
65.00	4.70	1.59	0.68	6.98	.15	.09	739	1165.0	9.3	-35.7
66.00	6.27	1.57	0.68	8.52	.06	.00	798	1165.4	7.5	-35.8
67.00	6.54	1.56	0.69	8.79	.04	-17.98	794	1165.8	5.7	-35.8
68.00	6.38	1.51	0.69	8.57	.06	-18.00	785	1166.2	3.9	-35.8
69.00	5.66	1.48	0.69	7.83	.10	.04	723	1166.5	2.0	-35.8
70.00	5.59	1.42	0.69	7.70	.11	.05	742	1166.9	0.2	-35.8
71.00	6.84	1.36	0.69	8.89	.06	.00	804	1167.2	358.4	-35.7
72.00	8.68	1.35	0.68	10.71	-17.98	-17.92	852	1167.5	356.6	-35.6
73.00	9.34	1.32	0.68	11.34	.95	.89	860	1167.9	354.8	-35.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38683.00	8.47	0.05	0.84	9.37	-18.07	-18.00	781	1170.3	339.9	-20.4
84.00	8.27	-0.02	0.82	9.07	.08	.02	772	1170.4	339.0	-15.9
85.00	7.82	-0.08	0.80	8.53	.11	.04	739	1170.5	338.0	-11.1
86.00	7.81	-0.13	0.77	8.45	.11	.04	703	1170.6	337.0	-6.0
38686.50	8.23	-0.14	0.76	8.85	-18.08	-18.02	741	1170.7	336.5	-3.5
87.00	10.76	-0.18	0.75	11.33	-17.97	-17.91	824	1170.7	336.0	-0.9
87.50	13.28	-0.20	0.74	13.82	.88	.82	882	1170.7	335.5	1.7
88.00	12.15	-0.21	0.73	12.67	.92	.85	851	1170.8	335.0	4.2
88.50	10.79	-0.22	0.72	11.29	.97	.90	819	1170.8	334.5	6.8
89.00	10.34	-0.24	0.70	10.80	.98	.92	805	1170.8	333.9	9.3
89.50	9.21	-0.27	0.69	9.63	-16.03	.97	740	1170.8	333.4	11.8
90.00	8.07	-0.28	0.68	8.47	.09	-18.02	706	1170.8	332.8	14.2
90.50	7.84	-0.30	0.66	8.20	.10	.04	687	1170.8	332.3	16.6
91.00	8.29	-0.32	0.65	8.62	.08	.02	739	1170.8	331.7	18.8
91.50	6.52	-0.33	0.64	8.83	.07	.01	749	1170.8	331.2	21.1
92.00	6.74	-0.34	0.62	9.02	.06	.00	754	1170.8	330.6	23.2
92.50	9.19	-0.36	0.61	9.44	.04	-17.97	763	1170.8	330.0	25.3
93.00	9.64	-0.38	0.60	9.85	.01	.95	766	1170.7	329.4	27.2
93.50	10.31	-0.40	0.58	10.49	-17.99	.92	784	1170.7	328.8	29.1
94.00	11.21	-0.42	0.56	11.35	.95	.88	806	1170.7	328.1	30.9
94.50	10.51	-0.42	0.55	10.64	.97	.90	776	1170.6	327.5	32.6
95.00	9.13	-0.44	0.54	9.24	-18.03	.96	697	1170.6	326.9	34.1
95.50	8.89	-0.46	0.52	8.95	.05	.98	717	1170.6	326.2	35.6
38696.00	9.33	-0.47	0.50	9.36	-18.03	-17.96	739	1170.5	325.5	37.0
97.00	9.30	-0.51	0.46	9.25	.03	.97	730	1170.4	324.1	39.6
98.00	9.27	-0.53	0.43	9.17	.04	.97	723	1170.3	322.7	41.8
99.00	9.23	-0.55	0.39	9.07	.05	.98	723	1170.3	321.2	43.7
38700.00	9.88	-0.58	0.36	9.66	-18.02	-17.96	739	1170.2	319.7	45.3
00.50	10.78	-0.56	0.34	10.56	-17.98	.91	758	1170.1	318.9	46.0
01.00	11.22	-0.54	0.31	10.99	.96	.89	758	1170.1	318.1	46.7
01.50	11.21	-0.53	0.29	10.97	.96	.89	753	1170.0	317.3	47.3
02.00	9.60	-0.52	0.27	9.35	-18.03	.96	701	1170.0	316.5	47.8
02.50	9.36	-0.48	0.25	9.13	.05	.98	703	1170.0	315.6	48.3
38703.00	9.18	-0.44	0.22	8.96	-18.06	-17.99	695	1169.9	314.8	48.7
04.00	8.99	-0.38	0.18	8.78	.07	-18.00	671	1169.9	313.1	49.4
05.00	8.57	-0.29	0.12	8.41	.09	.03	652	1169.8	311.3	50.0
06.00	7.88	-0.20	0.07	7.75	.14	.07	638	1169.8	309.5	50.3
38706.50	7.48	-0.17	0.04	7.35	-18.16	-18.10	629	1169.8	308.6	50.4
07.00	8.17	-0.11	0.01	8.07	.12	.06	645	1169.8	307.7	50.5
07.50	9.54	-0.08	-0.02	9.44	.05	-17.99	701	1169.8	306.7	50.5
08.00	10.00	-0.03	-0.05	9.92	.03	.96	696	1169.8	305.8	50.5
08.50	9.78	0.00	-0.08	9.70	.04	.97	673	1169.9	304.8	50.4
09.00	10.02	0.00	-0.10	9.92	.03	.97	675	1169.9	303.9	50.3
09.50	9.35	0.00	-0.13	9.22	.07	-18.00	666	1169.9	302.9	50.2
38710.00	8.86	0.00	-0.15	8.71	-18.10	-18.04	654	1169.9	301.9	50.0
11.00	8.67	0.00	-0.19	8.48	.12	.06	644	1170.0	299.9	49.5
12.00	8.05	0.00	-0.22	7.93	.16	.10	646	1170.1	297.9	48.9
13.00	8.06	0.00	-0.23	7.83	.17	.11	632	1170.3	295.8	48.1
38713.50	8.44	0.00	-0.24	8.20	-18.16	-18.10	661	1170.3	294.8	47.6
14.00	9.62	0.00	-0.24	9.38	.11	.04	706	1170.4	293.8	47.1
14.50	11.26	0.00	-0.24	11.02	.04	-17.97	741	1170.5	292.7	46.6
15.00	11.54	0.00	-0.24	11.30	.02	.96	733	1170.6	291.7	46.0
15.50	10.23	0.00	-0.23	10.00	.08	-18.02	664	1170.7	290.6	45.4

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38716.00	9.84	0.00	-0.23	9.61	-18.11	-18.04	660	1170.8	289.5	44.8
16.50	8.77	0.00	-0.22	8.55	.16	.10	646	1170.9	288.5	44.1
17.00	8.61	0.00	-0.22	8.39	.18	.11	638	1171.0	287.4	43.4
17.50	8.23	0.00	-0.21	8.02	.20	.14	635	1171.1	286.3	42.7
18.00	8.08	0.00	-0.20	7.88	.21	.15	639	1171.2	285.2	41.9
18.50	8.17	0.00	-0.19	7.98	.21	.15	634	1171.4	284.1	41.1
38719.00	8.82	0.00	-0.18	8.64	-18.17	-18.11	675	1171.5	283.0	40.0
20.00	8.65	0.00	-0.16	8.49	.19	.13	677	1171.8	280.8	38.3
21.00	8.43	0.00	-0.15	8.28	.21	.15	645	1172.0	278.6	36.4
22.00	8.76	0.00	-0.13	8.63	.20	.14	663	1172.3	276.4	34.4
23.00	9.04	0.00	-0.12	8.92	.20	.14	662	1172.6	274.1	32.3
24.00	8.17	0.00	-0.10	8.07	.24	.18	672	1172.9	271.9	30.1
25.00	8.54	0.00	-0.08	8.46	.23	.17	682	1173.2	269.6	27.7
26.00	9.68	0.00	-0.07	9.61	.19	.13	729	1173.5	267.3	25.2
27.00	8.09	0.00	-0.06	8.03	.27	.21	661	1173.8	265.0	22.5
28.00	7.66	0.00	-0.05	7.61	.30	.25	662	1174.1	262.7	19.7
29.00	8.63	0.00	-0.04	8.59	.26	.20	696	1174.4	260.3	16.9
30.00	9.80	0.00	-0.04	9.76	.22	.16	737	1174.7	258.0	13.9
31.00	7.93	0.00	-0.04	7.89	.32	.26	670	1175.0	255.6	10.8
32.00	7.11	0.00	-0.04	7.07	.37	.31	663	1175.2	253.2	7.6
33.00	6.82	0.00	-0.05	6.77	.40	.34	668	1175.5	250.7	4.4
34.00	7.17	0.00	-0.05	5.33	.51	.45	669	1175.7	248.3	1.2
35.00	7.88	0.00	-0.06	5.17	.52	.46	665	1175.9	245.7	-2.1
36.00	9.17	0.00	-0.07	5.02	.54	.49	679	1176.0	243.2	-5.4
37.00	8.37	0.00	-0.09	7.12	.40	.34	699	1176.2	240.6	-8.7
38.00	7.46	0.00	-0.12	7.82	.36	.30	694	1176.3	238.0	-11.9
39.00	7.80	0.00	-0.15	9.10	.29	.24	793	1176.3	235.3	-15.1
40.00	9.28	-0.44	-0.19	8.28	.33	.28	772	1176.3	232.6	-18.2
41.00	9.74	-1.27	-0.23	7.34	.38	.33	731	1176.3	229.8	-21.2
42.00	10.59	-1.77	-0.28	7.65	.37	.31	741	1176.3	226.9	-24.2
43.00	10.30	-2.05	-0.33	8.66	.32	.26	784	1176.2	224.0	-27.0
44.00	10.16	-2.32	-0.38	8.24	.35	.29	743	1176.0	221.0	-29.8
45.00	11.89	-2.53	-0.43	8.54	.33	.27	771	1175.9	217.8	-32.4
46.00	10.99	-2.69	-0.48	7.92	.36	.30	733	1175.6	214.6	-34.9
47.00	10.97	-2.86	-0.54	7.47	.39	.33	728	1175.3	211.2	-37.3
48.00	10.54	-2.98	-0.58	8.93	.30	.24	823	1175.0	207.7	-39.5
49.00	11.33	-3.11	-0.63	7.82	.35	.29	777	1174.6	204.0	-41.7
50.00	10.78	-3.27	-0.68	7.57	.36	.30	773	1174.2	200.1	-43.7
51.00	10.49	-3.40	-0.72	6.97	.39	.33	738	1173.7	195.9	-45.7
52.00	10.11	-3.50	-0.79	7.59	.35	.29	800	1173.1	191.4	-47.5
53.00	9.98	-3.60	-0.81	6.83	.39	.33	759	1172.6	186.5	-49.3
54.00	9.86	-3.66	-0.86	6.37	.41	.36	712	1171.9	180.9	-50.9
55.00	9.81	-3.73	-0.91	5.82	.45	.39	717	1171.2	174.6	-52.6
56.00	9.77	-3.80	-0.95	5.57	.46	.41	714	1170.5	167.2	-54.1
57.00	9.42	-3.56	-0.99	4.87	.51	.46	707	1169.8	153.7	-56.2
58.00	8.78	-3.62	-1.03	4.13	.58	.53	717	1169.0	138.8	-57.5
59.00	8.87	-3.69	-1.06	4.13	.57	.52	717	1168.1	121.0	-58.3
60.00	9.25	-3.73	-1.10	4.42	.53	.48	710	1167.2	102.3	-58.3
61.00	10.03	-3.79	-1.13	5.11	.46	.41	711	1166.3	85.2	-57.6
62.00	10.31	-3.86	-1.14	5.32	.44	.39	727	1165.4	71.1	-56.5
63.00	10.14	-3.91	-1.16	5.08	.46	.41	727	1164.4	60.1	-55.1
64.00	10.16	-3.93	-1.17	5.06	.45	.40	728	1163.5	51.3	-53.4
65.00	10.13	-3.95	-1.18	5.00	.45	.40	719	1162.5	44.3	-51.7
66.00	10.41	-3.94	-1.18	5.29	.42	.37	715	1161.4	38.4	-50.0
67.00	11.04	-3.93	-1.18	5.93	.36	.32	775	1160.4	33.3	-48.2
68.00	11.02	-3.89	-1.18	5.95	.36	.32	733	1159.4	28.8	-46.5
69.00	10.96	-3.83	-1.17	5.96	.35	.31	742	1158.4	24.8	-44.8
70.00	10.65	-3.82	-1.16	5.67	.37	.33	733	1157.3	21.2	-43.1
71.00	10.43	-3.80	-1.16	5.47	.38	.34	725	1156.3	17.8	-41.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38772.00	10.02	-3.70	-1.14	5.18	-18.40	-18.36	723	1155.3	14.6	-39.9
73.00	9.69	-3.59	-1.13	4.97	.42	.38	743	1154.3	11.6	-38.3
74.00	9.58	-3.50	-1.12	4.96	.41	.38	746	1153.3	8.7	-36.8
75.00	9.91	-3.39	-1.10	5.42	.37	.34	728	1152.3	5.9	-35.4
76.00	9.71	-3.29	-1.08	5.34	.37	.34	718	1151.3	3.3	-33.9
77.00	9.50	-3.14	-1.06	5.30	.37	.34	717	1150.4	0.6	-32.5
78.00	9.23	-3.05	-1.04	5.14	.38	.36	724	1149.5	358.1	-31.2
79.00	9.07	-2.92	-1.01	5.14	.38	.35	717	1148.6	355.6	-29.8
80.00	9.02	-2.76	-0.96	5.28	.37	.34	711	1147.8	353.2	-28.5
81.00	9.08	-2.62	-0.94	5.52	.35	.32	719	1147.0	350.8	-27.2
82.00	9.61	-2.44	-0.90	6.26	.29	.27	730	1146.2	348.4	-25.8
83.00	9.00	-2.26	-0.85	5.89	.32	.29	731	1145.5	346.0	-24.5
84.00	7.95	-2.09	-0.81	5.05	.38	.36	709	1144.8	343.7	-23.2
85.00	7.59	-1.91	-0.76	4.92	.39	.37	695	1144.1	341.4	-21.9
86.00	7.47	-1.73	-0.71	5.03	.38	.36	694	1143.5	339.2	-20.6
87.00	7.43	-1.56	-0.66	5.21	.37	.35	699	1143.0	336.9	-19.2
88.00	7.41	-1.36	-0.61	5.44	.35	.33	699	1142.5	334.7	-17.8
89.00	7.24	-1.15	-0.56	5.53	.34	.32	697	1142.0	332.4	-16.5
90.00	7.09	-0.88	-0.51	5.70	.33	.31	697	1141.6	330.2	-15.1
91.00	7.09	-0.66	-0.46	5.97	.31	.29	733	1141.2	328.0	-13.7
92.00	6.94	-0.42	-0.41	6.11	.30	.28	741	1140.9	325.8	-12.2
93.00	6.66	-0.21	-0.36	6.09	.30	.28	733	1140.6	323.6	-10.8
94.00	6.30	0.00	-0.31	5.99	.31	.29	722	1140.4	321.5	-9.3
95.00	6.27	0.21	-0.26	6.22	.29	.28	685	1140.2	319.3	-7.8
96.00	6.28	0.37	-0.20	6.45	.28	.26	689	1140.1	317.2	-6.3
97.00	6.63	0.57	-0.16	7.05	.24	.23	751	1140.0	315.0	-4.9
98.00	6.68	0.74	-0.10	7.32	.23	.21	708	1139.9	312.9	-3.5
99.00	6.40	0.88	-0.05	7.23	.23	.22	708	1139.9	310.8	-2.2
38800.00	6.09	1.04	0.00	7.13	.24	.23	695	1139.9	308.8	-0.8
01.00	5.86	1.12	0.06	7.03	.25	.23	703	1139.9	306.7	0.5
02.00	5.81	1.16	0.11	7.08	.25	.23	692	1140.0	304.6	1.9
03.00	5.62	1.10	0.16	6.88	.26	.25	679	1140.1	302.5	3.3
04.00	5.49	0.99	0.20	6.68	.27	.26	699	1140.2	300.5	4.7
05.00	5.95	0.82	0.25	7.02	.25	.24	707	1140.3	298.4	6.2
06.00	7.21	0.39	0.29	7.90	.20	.19	734	1140.5	296.3	7.6
07.00	7.41	0.00	0.33	7.74	.21	.20	722	1140.6	294.2	9.1
08.00	7.05	0.00	0.37	7.42	.23	.22	718	1140.8	292.2	10.7
09.00	6.69	0.00	0.40	7.09	.25	.24	713	1140.9	290.1	12.3
10.00	7.03	0.00	0.42	7.45	.23	.22	724	1141.1	288.0	13.9
11.00	7.54	0.00	0.43	7.97	.20	.19	734	1141.3	285.9	15.6
12.00	7.42	0.00	0.44	7.86	.21	.19	705	1141.4	283.8	17.3
13.00	7.54	0.00	0.44	7.98	.20	.19	705	1141.6	281.7	19.1
14.00	7.82	0.00	0.44	8.26	.19	.17	721	1141.7	279.6	20.9
15.00	8.27	0.00	0.44	8.71	.17	.15	720	1141.8	277.5	22.8
16.00	8.84	0.00	0.42	9.26	.14	.12	738	1141.9	275.4	24.7
17.00	8.43	0.00	0.40	8.83	.16	.14	723	1142.0	273.2	26.7
18.00	8.53	0.00	0.38	8.91	.16	.14	728	1142.0	271.0	28.8
19.00	8.56	0.00	0.37	8.93	.16	.14	726	1142.0	268.9	30.8
20.00	8.64	0.00	0.36	9.00	.16	.14	727	1142.0	266.6	33.0
21.00	8.70	0.00	0.32	9.02	.16	.14	726	1141.9	264.4	35.1
22.00	9.04	0.00	0.28	9.32	.14	.12	718	1141.8	262.1	37.3
23.00	9.42	0.00	0.25	9.67	.12	.10	684	1141.7	259.9	39.6
24.00	9.67	0.00	0.21	9.88	.11	.09	732	1141.4	257.5	41.9
25.00	9.62	0.00	0.17	9.79	.12	.10	744	1141.2	255.1	44.2
26.00	9.21	0.00	0.13	9.34	.14	.12	724	1140.9	252.7	46.5
27.00	9.12	0.00	0.08	9.20	.14	.13	719	1140.5	250.2	48.9
28.00	9.06	0.00	0.04	9.10	.15	.13	722	1140.1	247.6	51.2
29.00	8.98	0.00	0.00	8.98	.15	.14	719	1139.6	244.9	53.6
30.00	8.76	0.00	-0.03	8.73	.16	.15	710	1139.0	242.1	56.0
31.00	8.63	0.00	-0.06	8.57	.16	.15	701	1138.4	239.2	58.4

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38832.00	8.69	0.00	-0.08	8.61	-18.16	-18.15	674	1137.7	236.1	60.7
33.00	8.73	0.00	-0.10	8.63	.16	.15	660	1136.9	232.7	63.1
34.00	9.18	0.00	-0.12	9.06	.13	.12	686	1136.1	229.1	65.4
35.00	9.26	0.00	-0.13	9.13	.13	.12	690	1135.2	225.2	67.6
36.00	9.08	0.00	-0.14	8.94	.14	.13	700	1134.3	220.7	69.8
37.00	8.86	-0.53	-0.15	8.18	.17	.17	651	1133.3	215.6	71.9
38.00	9.67	-1.47	-0.16	8.04	.18	.18	647	1132.3	209.6	73.9
39.00	11.27	-2.13	-0.16	8.98	.13	.13	708	1131.2	202.4	75.8
40.00	12.21	-2.76	-0.16	9.29	.11	.11	712	1130.0	193.6	77.4
41.00	12.78	-3.31	-0.17	9.30	.11	.11	713	1128.8	182.4	78.7
42.00	13.48	-3.81	-0.17	9.50	.09	.09	679	1127.6	168.4	79.7
43.00	13.97	-4.22	-0.18	9.57	.08	.08	707	1126.3	151.6	80.1
44.00	14.92	-4.60	-0.18	10.14	.05	.06	698	1125.1	133.5	79.8
45.00	15.20	-4.94	-0.18	10.08	.05	.06	701	1123.7	116.4	78.9
46.00	15.31	-5.23	-0.18	9.91	.05	.07	703	1122.4	102.0	77.4
47.00	15.15	-5.49	-0.17	9.49	.07	.09	707	1121.1	90.5	75.6
38848.00	15.27	-5.69	-0.16	9.42	-18.07	-18.09	722	1119.7	81.4	73.5
50.00	15.53	-6.13	-0.14	9.26	.07	.10	726	1117.0	68.0	69.1
52.00	16.00	-6.21	-0.10	9.69	.05	.07	752	1114.2	58.3	64.5
54.00	16.41	-6.29	-0.05	10.08	.02	.05	771	1111.5	50.6	59.8
56.00	16.82	-6.27	0.00	10.55	-17.99	.03	785	1108.8	44.1	55.2
58.00	17.14	-6.12	0.06	11.09	.96	.00	806	1106.2	38.3	50.6
60.00	17.34	-5.93	0.11	11.52	.94	-17.98	825	1103.7	33.0	46.1
62.00	17.31	-5.62	0.16	11.85	.92	.97	838	1101.4	28.0	41.7
64.00	16.94	-5.23	0.24	11.95	.91	.96	846	1099.2	23.3	37.4
38865.00	16.69	-5.01	0.27	11.94	-17.91	-17.96	849	1098.2	21.0	35.3
66.00	15.68	-4.81	0.31	11.18	.94	.99	832	1097.3	18.7	33.2
38866.50	15.35	-4.68	0.33	11.00	-17.95	-18.00	827	1096.8	17.6	32.1
67.00	16.37	-4.56	0.36	12.18	.90	-17.96	860	1096.4	16.5	31.1
67.50	16.70	-4.44	0.38	12.64	.88	.94	870	1096.0	15.4	30.0
68.00	24.26	-4.30	0.40	20.36	.68	.73	1009	1095.6	14.2	29.0
68.50	22.30	-4.16	0.43	18.57	.72	.78	973	1095.2	13.2	27.9
69.00	18.28	-4.04	0.45	14.69	.82	.88	899	1094.8	12.1	26.9
69.50	17.42	-3.90	0.48	14.00	.84	.90	895	1094.5	11.0	25.9
70.00	16.31	-3.75	0.50	13.07	.87	.93	873	1094.2	9.9	24.8
38871.00	15.14	-3.44	0.56	12.26	-17.90	-17.96	859	1093.6	7.7	22.8
72.00	14.46	-3.15	0.61	11.92	.91	.97	854	1093.1	5.6	20.7
73.00	13.72	-2.82	0.66	11.55	.93	.99	844	1092.6	3.5	18.7
74.00	12.79	-2.50	0.71	11.01	.95	-18.01	828	1092.3	1.4	16.7
75.00	11.96	-2.16	0.76	10.57	.97	.03	815	1092.0	359.3	14.6
76.00	11.57	-1.82	0.82	10.57	.97	.03	814	1091.8	357.2	12.6
77.00	11.21	-1.47	0.86	10.60	.97	.04	812	1091.7	355.1	10.6
78.00	10.43	-1.10	0.91	10.24	.99	.05	802	1091.7	353.0	8.6
79.00	9.51	-0.75	0.95	9.71	-18.02	.08	786	1091.7	350.9	6.5
80.00	8.67	-0.39	0.99	9.27	.04	.10	767	1091.9	348.9	4.5
81.00	8.48	-0.04	1.03	9.47	.03	.09	774	1092.0	346.8	2.4
82.00	7.80	0.31	1.06	9.17	.05	.11	769	1092.3	344.7	0.3
83.00	7.21	0.67	1.09	8.97	.06	.12	763	1092.6	342.6	-1.7
84.00	6.92	1.05	1.12	9.09	.05	.11	765	1093.0	340.6	-3.8
85.00	6.93	1.39	1.16	9.48	.03	.09	762	1093.4	338.5	-5.8
86.00	8.44	1.72	1.19	11.35	-17.96	.01	819	1093.8	336.4	-7.9
87.00	6.23	2.04	1.22	9.49	-18.04	.09	765	1094.3	334.4	-10.0
88.00	6.03	2.37	1.25	9.65	.03	.09	774	1094.9	332.3	-12.1
89.00	6.08	2.68	1.28	10.04	.01	.07	782	1095.4	330.2	-14.2
90.00	6.10	2.97	1.30	10.37	.00	.05	788	1096.0	328.1	-16.3
91.00	5.17	3.26	1.32	9.75	.03	.08	776	1096.6	326.1	-18.4

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38892.00	4.49	3.50	1.34	9.34	-18.05	-18.10	764	1097.3	324.0	-20.5
93.00	3.56	3.75	1.35	8.65	.09	.14	739	1097.9	321.9	-22.7
94.00	3.55	4.07	1.35	8.96	.07	.12	751	1098.6	319.8	-24.8
95.00	4.24	4.15	1.35	9.74	.04	.08	773	1099.2	317.7	-27.0
96.00	5.13	4.31	1.35	10.79	-17.99	.03	795	1099.9	315.6	-29.2
97.00	4.45	4.46	1.34	10.25	-18.01	.05	777	1100.5	313.4	-31.4
98.00	4.02	4.57	1.33	9.92	.02	.07	773	1101.2	311.3	-33.6
99.00	3.79	4.66	1.32	9.77	.03	.07	770	1101.8	309.1	-35.9
38900.00	4.09	4.70	1.30	10.09	.01	.06	776	1102.4	307.0	-38.2
01.00	4.24	4.72	1.28	10.24	.00	.05	777	1103.0	304.8	-40.5
02.00	4.42	4.69	1.25	10.36	-17.99	.04	776	1103.6	302.6	-42.9
03.00	4.95	4.65	1.22	10.83	.97	.02	784	1104.1	300.4	-45.3
04.00	5.18	4.56	1.18	10.91	.97	.01	782	1104.6	298.1	-47.8
05.00	4.80	4.39	1.14	10.32	.99	.04	766	1105.1	295.8	-50.3
06.00	4.10	4.23	1.09	9.42	-18.03	.07	741	1105.6	293.5	-52.8
07.00	4.05	4.02	1.04	9.12	.04	.08	729	1106.0	291.2	-55.4
08.00	4.09	3.80	1.00	8.89	.05	.09	719	1106.4	288.8	-58.0
09.00	4.14	3.55	0.94	8.63	.06	.10	711	1106.7	286.3	-60.7
10.00	4.22	3.27	0.88	8.37	.07	.11	704	1107.0	283.8	-63.4
11.00	4.38	2.96	0.83	8.17	.08	.11	696	1107.3	281.2	-66.2
12.00	4.56	2.61	0.77	7.94	.09	.12	687	1107.5	278.6	-69.0
13.00	4.82	2.25	0.71	7.78	.09	.12	679	1107.6	275.8	-71.9
14.00	5.61	1.92	0.64	8.17	.06	.09	691	1107.7	272.8	-74.9
15.00	6.60	1.60	0.58	8.78	.01	.05	708	1107.7	269.7	-77.8
16.00	6.99	1.33	0.52	8.84	-17.99	.03	709	1107.6	266.4	-80.8
17.00	7.40	1.06	0.46	8.92	.98	.02	715	1107.5	262.7	-83.9
18.00	8.12	0.84	0.39	9.35	.96	.00	726	1107.4	258.7	-86.9
19.00	8.81	0.66	0.33	9.79	.93	-17.97	737	1107.1	254.0	-90.0
20.00	9.06	0.51	0.26	9.83	.91	.95	740	1106.8	248.6	-93.0
21.00	8.78	0.37	0.18	9.33	.92	.96	731	1106.4	241.9	-96.0
22.00	9.31	0.24	0.11	9.66	.91	.96	738	1106.0	233.3	-98.8
23.00	9.69	0.11	0.04	9.84	.90	.94	744	1105.4	221.7	-101.3
24.00	9.20	-0.05	-0.04	9.11	.93	.97	729	1104.9	205.5	-103.4
25.00	7.94	-0.25	-0.12	7.56	-18.00	-18.05	693	1104.2	184.0	-104.6
38926.00	10.88	-0.51	-0.20	10.17	-17.85	-17.90	762	1103.5	160.0	-104.6
38926.60	11.19	-0.69	-0.24	10.26	-17.84	-17.89	767	1103.0	145.8	-103.9
26.80	12.67	-0.74	-0.26	11.67	.77	.82	800	1102.9	141.8	-103.7
27.00	12.74	-0.80	-0.28	11.67	.76	.81	802	1102.7	138.1	-103.3
27.20	12.81	-0.86	-0.29	11.66	.76	.80	803	1102.6	134.6	-103.0
27.40	14.29	-0.92	-0.31	13.06	.70	.75	833	1102.4	131.3	-102.6
27.60	17.19	-0.98	-0.32	15.89	.61	.66	885	1102.2	128.3	-102.2
27.80	22.91	-1.06	-0.34	21.51	.47	.52	976	1102.1	125.4	-101.8
28.00	15.91	-1.12	-0.35	14.44	.64	.68	864	1101.9	122.8	-101.4
28.20	14.56	-1.18	-0.37	13.01	.69	.74	837	1101.7	120.3	-100.9
28.40	13.21	-1.26	-0.39	11.56	.75	.79	807	1101.6	117.9	-100.4
28.60	11.86	-1.31	-0.40	10.16	.81	.86	776	1101.4	115.7	-99.9
28.80	10.51	-1.38	-0.42	8.71	.89	.93	739	1101.2	113.7	-99.4
29.00	10.58	-1.47	-0.43	8.68	.89	.94	740	1101.0	111.7	-98.9
29.20	10.64	-1.51	-0.45	8.68	.88	.93	739	1100.9	109.9	-98.4
38930.00	10.16	-1.81	-0.51	7.85	-17.94	-17.99	723	1100.1	103.5	-96.3
31.00	10.35	-2.17	-0.59	7.60	.97	-18.02	720	1099.2	97.0	-93.6
32.00	10.59	-2.55	-0.66	7.38	.99	.04	717	1098.2	91.7	-90.8
33.00	10.31	-2.92	-0.74	6.65	-18.03	.08	700	1097.2	87.1	-88.0
34.00	10.75	-3.28	-0.81	6.66	.02	.07	706	1096.2	83.1	-85.2
35.00	11.46	-3.62	-0.88	6.96	-17.99	.05	723	1095.1	79.5	-82.4
36.00	13.18	-3.94	-0.94	8.30	.91	-17.97	769	1094.1	76.1	-79.7
37.00	13.35	-4.25	-0.99	8.11	.92	.98	770	1093.0	73.0	-77.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{p}$	$10^7 \dot{p}_s$	$10^7 \dot{p}_t$	$-10^7 \dot{p}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38938.00	12.66	-4.51	-1.04	7.11	-17.97	-18.03	743	1092.0	70.1	-74.3
39.00	12.13	-4.78	-1.10	6.25	-18.03	.10	718	1091.0	67.3	-71.6
40.00	13.38	-4.99	-1.14	7.25	-17.97	.04	760	1089.9	64.6	-69.0
41.00	15.14	-5.23	-1.19	8.72	.89	-17.96	810	1088.9	62.0	-66.5
42.00	13.53	-5.42	-1.24	6.88	.99	-18.06	751	1088.0	59.4	-63.9
43.00	13.56	-5.55	-1.29	6.71	-18.01	.08	751	1087.0	57.0	-61.4
44.00	13.67	-5.68	-1.33	6.66	.02	.09	759	1086.1	54.5	-59.0
45.00	13.82	-5.76	-1.37	6.70	.02	.10	767	1085.2	52.1	-56.5
46.00	13.96	-5.82	-1.41	6.73	.03	.10	774	1084.4	49.8	-54.1
47.00	14.19	-5.82	-1.44	6.93	.02	.09	783	1083.6	47.5	-51.8
48.00	15.01	-5.79	-1.47	7.76	-17.97	.04	817	1082.9	45.2	-49.5
49.00	15.14	-5.73	-1.50	7.91	.96	.04	828	1082.2	43.0	-47.2
50.00	14.63	-5.65	-1.52	7.46	.99	.07	813	1081.5	40.7	-44.9
51.00	14.66	-5.58	-1.53	7.55	.99	.07	820	1080.9	38.5	-42.7
52.00	14.21	-5.47	-1.54	7.20	-18.02	.10	818	1080.4	36.3	-40.5
53.00	13.80	-5.33	-1.54	6.93	.04	.12	817	1079.9	34.1	-38.3
54.00	13.64	-5.20	-1.54	6.90	.05	.13	815	1079.5	31.9	-36.2
55.00	13.75	-5.00	-1.53	7.21	.04	.12	828	1079.2	29.8	-34.1
56.00	13.71	-4.79	-1.52	7.40	.04	.12	837	1078.9	27.6	-32.0
57.00	13.48	-4.57	-1.50	7.41	.05	.13	838	1078.7	25.5	-29.9
58.00	13.06	-4.33	-1.49	7.23	.07	.15	836	1078.6	23.4	-27.8
59.00	12.66	-4.06	-1.48	7.12	.08	.16	834	1078.5	21.2	-25.8
60.00	12.52	-3.80	-1.46	7.26	.08	.16	836	1078.5	19.1	-23.7
61.00	12.97	-3.49	-1.43	8.05	.04	.12	867	1078.6	17.0	-21.7
62.00	12.32	-3.19	-1.41	7.73	.07	.14	860	1078.7	14.9	-19.7
63.00	11.87	-2.87	-1.38	7.62	.08	.16	859	1079.0	12.8	-17.7
64.00	11.44	-2.55	-1.34	7.55	.09	.17	855	1079.3	10.7	-15.7
65.00	10.99	-2.24	-1.30	7.45	.10	.18	845	1079.7	8.6	-13.7
66.00	10.27	-1.92	-1.26	7.09	.13	.21	832	1080.1	6.5	-11.8
67.00	9.81	-1.59	-1.22	7.00	.15	.22	834	1080.7	4.5	-9.8
68.00	9.43	-1.26	-1.16	7.01	.15	.22	834	1081.3	2.4	-7.8
69.00	9.18	-0.93	-1.12	7.13	.15	.22	832	1081.9	0.3	-5.9
70.00	9.64	-0.56	-1.07	8.01	.11	.18	867	1082.6	358.2	-3.9
71.00	9.33	-0.21	-1.02	8.10	.11	.18	875	1083.4	356.1	-1.9
72.00	8.39	0.13	-0.97	7.55	.15	.21	858	1084.3	354.0	0.1
73.00	7.61	0.48	-0.92	7.17	.17	.24	843	1085.2	351.9	2.1
74.00	7.29	0.82	-0.88	7.23	.18	.24	842	1086.1	349.8	4.1
75.00	7.03	1.17	-0.82	7.37	.17	.23	843	1087.1	347.7	6.1
76.00	6.65	1.50	-0.77	7.38	.18	.23	847	1088.2	345.5	8.2
77.00	6.50	1.84	-0.71	7.63	.16	.22	861	1089.2	343.4	10.2
78.00	6.14	2.17	-0.65	7.66	.17	.22	862	1090.3	341.3	12.3
79.00	5.90	2.49	-0.59	7.80	.16	.22	867	1091.4	339.1	14.3
80.00	5.39	2.79	-0.53	7.66	.18	.23	859	1092.6	337.0	16.4
81.00	4.62	3.11	-0.47	7.26	.20	.25	840	1093.7	334.8	18.5
82.00	3.97	3.40	-0.41	6.96	.23	.27	825	1094.9	332.6	20.6
83.00	3.68	3.66	-0.35	7.00	.23	.27	826	1096.0	330.4	22.7
84.00	3.30	3.92	-0.29	6.93	.23	.28	821	1097.2	328.2	24.8
85.00	2.72	4.16	-0.24	6.65	.25	.30	808	1098.3	325.9	26.9
86.00	1.89	4.28	-0.18	5.99	.30	.35	768	1099.5	323.6	29.1
87.00	1.53	4.58	-0.13	5.98	.31	.35	760	1100.6	321.3	31.2
88.00	1.32	4.91	-0.08	6.15	.30	.33	773	1101.6	318.9	33.4
89.00	1.15	5.03	-0.04	6.14	.30	.34	755	1102.7	316.5	35.6
90.00	0.95	5.13	0.00	6.08	.30	.34	748	1103.7	314.1	37.8
91.00	1.47	5.20	0.03	6.71	.26	.30	773	1104.7	311.6	40.0
92.00	1.13	5.21	0.06	6.40	.28	.31	734	1105.6	309.0	42.2
93.00	0.49	5.20	0.10	5.80	.32	.36	720	1106.5	306.3	44.5
94.00	0.41	5.16	0.13	5.70	.33	.36	699	1107.3	303.5	46.8
95.00	0.32	5.06	0.16	5.53	.34	.37	713	1108.1	300.5	49.0
96.00	0.17	4.89	0.18	5.23	.36	.39	698	1108.8	297.5	51.3
97.00	0.12	4.64	0.22	4.98	.38	.41	710	1109.5	294.2	53.6

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38998.00	0.53	4.26	0.23	5.02	-18.38	-18.41	701	1110.1	290.6	55.9
99.00	0.94	3.79	0.25	4.98	.38	.41	689	1110.6	286.7	58.2
39000.00	1.80	3.03	0.26	5.09	.37	.40	679	1111.0	282.4	60.5
01.00	2.67	1.81	0.27	4.75	.40	.42	675	1111.4	277.6	62.8
02.00	3.95	0.00	0.27	4.22	.45	.47	682	1111.7	271.9	65.0
03.00	5.57	0.00	0.26	5.83	.30	.33	697	1111.9	265.2	67.2
04.00	7.49	0.00	0.26	7.75	.18	.20	807	1112.0	257.1	69.2
05.00	6.88	0.00	0.25	7.13	.21	.24	780	1112.0	246.9	71.1
06.00	6.40	0.00	0.25	6.65	.24	.27	757	1112.0	234.2	72.7
07.00	6.97	0.00	0.24	7.21	.20	.23	773	1111.9	218.8	73.9
08.00	7.04	0.00	0.23	7.27	.20	.22	754	1111.7	201.4	74.5
09.00	7.37	0.00	0.22	7.59	.17	.20	776	1111.4	184.2	74.5
10.00	6.71	0.00	0.20	6.91	.21	.24	735	1111.0	169.0	73.9
11.00	6.68	0.00	0.18	6.86	.21	.24	734	1110.6	156.6	72.8
12.00	6.61	0.00	0.16	6.77	.22	.25	738	1110.1	146.6	71.4
13.00	6.80	0.00	0.13	6.93	.20	.23	746	1109.5	138.5	69.8
14.00	6.99	0.00	0.10	7.09	.19	.22	747	1108.8	131.9	68.1
15.00	6.99	0.00	0.07	7.06	.19	.22	728	1108.1	126.4	66.2
16.00	7.02	0.00	0.04	7.06	.18	.22	696	1107.3	121.6	64.3
17.00	7.49	0.00	0.01	7.50	.15	.19	744	1106.4	117.4	62.4
18.00	7.87	0.00	-0.02	7.85	.13	.17	755	1105.5	113.6	60.4
19.00	8.40	0.00	-0.05	8.35	.09	.13	732	1104.5	110.2	58.3
20.00	9.12	0.00	-0.08	9.04	.05	.09	735	1103.5	106.9	56.3
21.00	8.91	0.00	-0.11	8.80	.06	.10	751	1102.4	103.9	54.3
22.00	8.54	0.00	-0.14	8.40	.08	.12	687	1101.3	101.1	52.3
23.00	8.14	0.00	-0.16	7.98	.09	.14	694	1100.1	98.3	50.3
24.00	7.99	0.00	-0.19	7.80	.10	.15	712	1099.0	95.7	48.3
25.00	8.40	0.00	-0.22	8.18	.08	.13	736	1097.8	93.2	46.3
26.00	8.66	0.00	-0.24	8.42	.05	.11	737	1096.6	90.8	44.3
27.00	8.59	0.00	-0.26	8.33	.05	.11	710	1095.4	88.4	42.4
28.00	8.87	0.00	-0.29	8.58	.03	.09	718	1094.1	86.0	40.5
29.00	9.14	0.00	-0.30	8.84	.00	.07	738	1092.9	83.7	38.6
30.00	9.75	0.00	-0.32	9.43	-17.97	.03	768	1091.7	81.5	36.7
31.00	11.27	0.00	-0.33	10.94	.89	-17.96	808	1090.6	79.3	34.9
32.00	10.52	0.00	-0.34	10.18	.92	.98	780	1089.4	77.1	33.1
33.00	10.38	0.00	-0.34	10.04	.92	.98	793	1088.3	74.9	31.3
34.00	10.57	0.00	-0.34	10.23	.90	.97	806	1087.2	72.8	29.5
35.00	11.03	0.00	-0.33	10.70	.87	.94	817	1086.2	70.7	27.8
36.00	11.41	0.00	-0.32	11.09	.85	.92	824	1085.2	68.6	26.1
37.00	11.61	0.00	-0.30	11.31	.83	.91	835	1084.3	66.5	24.5
38.00	12.12	0.00	-0.28	11.84	.81	.89	848	1083.4	64.4	22.8
39.00	12.44	-0.39	-0.25	11.80	.81	.89	845	1082.6	62.3	21.2
40.00	12.79	-1.26	-0.22	11.31	.83	.91	830	1081.9	60.3	19.6
41.00	13.67	-1.78	-0.19	11.70	.81	.90	830	1081.2	58.2	18.0
42.00	13.73	-2.02	-0.16	11.56	.82	.90	820	1080.6	56.2	16.5
43.00	13.48	-2.13	-0.12	11.22	.83	.92	817	1080.1	54.1	15.0
44.00	12.68	-2.15	-0.08	10.45	.86	.95	796	1079.7	52.1	13.5
45.00	12.46	-2.09	-0.04	10.32	.87	.96	785	1079.4	50.1	12.0
46.00	12.19	-2.03	0.01	10.17	.88	.97	769	1079.2	48.0	10.5
47.00	11.65	-1.94	0.06	9.77	.90	.99	746	1079.1	46.0	9.0
48.00	11.13	-1.79	0.11	9.44	.92	-18.01	742	1079.0	44.0	7.6
49.00	10.66	-1.62	0.16	9.19	.94	.03	741	1079.1	42.0	6.1
50.00	10.14	-1.45	0.22	8.90	.96	.05	724	1079.3	39.9	4.7
51.00	9.62	-1.26	0.26	8.61	.98	.06	676	1079.5	37.9	3.2
52.00	9.43	-1.05	0.32	8.70	.98	.06	681	1079.9	35.8	1.8
53.00	9.30	-0.83	0.37	8.84	.97	.06	698	1080.4	33.8	0.3
54.00	9.44	-0.57	0.42	9.28	.96	.04	730	1080.9	31.7	-1.1
55.00	9.45	-0.33	0.46	9.58	.95	.03	730	1081.6	29.7	-2.6
56.00	10.19	-0.10	0.51	10.60	.91	-17.99	736	1082.4	27.6	-4.2
57.00	11.44	0.14	0.56	12.13	.85	.93	794	1083.2	25.5	-5.6

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39058.00	12.89	0.38	0.60	13.87	-17.80	-17.88	851	1084.2	23.5	-7.0
59.00	10.08	0.62	0.65	11.35	.89	.97	784	1085.2	21.4	-8.4
60.00	9.06	0.85	0.70	10.61	.93	-18.00	767	1086.3	19.3	-9.8
61.00	9.60	1.09	0.75	11.45	.90	-17.98	789	1087.5	17.2	-11.2
62.00	9.45	1.35	0.80	11.60	.91	.98	796	1088.8	15.1	-12.5
63.00	9.16	1.58	0.85	11.60	.91	.98	800	1090.2	12.9	-13.9
64.00	8.75	1.81	0.90	11.46	.93	.99	793	1091.6	10.8	-15.3
65.00	8.21	2.04	0.95	11.20	.95	-18.01	791	1093.1	8.6	-16.7
66.00	7.95	2.25	1.00	11.20	.95	.01	791	1094.7	6.5	-18.1
67.00	7.33	2.44	1.04	10.81	.98	.03	783	1096.3	4.3	-19.5
68.00	7.72	2.64	1.08	11.44	.96	.01	805	1098.0	2.1	-20.9
69.00	7.87	2.85	1.12	11.84	.95	.00	812	1099.7	359.8	-22.4
70.00	6.76	3.05	1.16	12.97	.92	-17.97	836	1101.5	357.6	-23.8
71.00	9.86	3.23	1.19	14.28	.89	.93	866	1103.3	355.3	-25.3
72.00	7.98	3.41	1.22	12.61	.95	.99	837	1105.1	353.0	-26.8
73.00	6.60	3.59	1.24	11.43	-18.00	-18.04	811	1107.0	350.6	-28.3
74.00	6.01	3.73	1.27	11.00	.02	.06	804	1108.8	348.2	-29.8
75.00	5.87	3.88	1.28	11.02	.03	.06	813	1110.7	345.7	-31.3
76.00	5.79	4.01	1.30	11.11	.03	.06	815	1112.6	343.2	-32.9
77.00	5.61	4.15	1.31	11.07	.04	.07	810	1114.5	340.7	-34.4
78.00	6.67	4.27	1.32	12.26	.00	.03	844	1116.4	338.0	-36.0
79.00	4.86	4.39	1.32	10.57	.07	.09	798	1118.2	335.3	-37.6
80.00	4.64	4.46	1.31	10.41	.09	.10	803	1120.1	332.4	-39.3
81.00	4.32	4.51	1.29	10.13	.10	.12	796	1121.9	329.5	-40.9
82.00	4.69	4.59	1.28	10.56	.09	.10	808	1123.7	326.4	-42.6
83.00	5.36	4.66	1.26	11.28	.07	.08	826	1125.5	323.1	-44.3
84.00	6.21	4.69	1.24	12.14	.05	.05	845	1127.2	319.5	-46.0
85.00	5.84	4.74	1.22	11.79	.06	.06	834	1128.9	315.7	-47.7
86.00	5.31	4.76	1.20	11.27	.08	.08	836	1130.5	311.5	-49.4
87.00	4.75	4.75	1.18	10.68	.10	.10	836	1132.0	306.8	-51.1
88.00	4.50	4.74	1.15	10.39	.12	.11	833	1133.5	301.5	-52.8
89.00	4.04	4.67	1.12	9.84	.15	.14	815	1135.0	295.3	-54.4
90.00	4.34	4.66	1.09	10.09	.14	.13	825	1136.4	287.9	-55.9
91.00	4.28	4.60	1.05	9.92	.15	.14	823	1137.7	278.8	-57.4
92.00	4.24	4.56	1.00	9.79	.16	.14	827	1138.9	267.6	-58.6
93.00	4.23	4.47	0.96	9.66	.16	.15	827	1140.0	253.7	-59.4
94.00	4.53	4.38	0.91	9.81	.16	.15	830	1141.1	237.4	-59.9
95.00	5.03	4.26	0.86	10.15	.16	.14	826	1142.0	220.0	-59.7
96.00	4.39	4.14	0.81	9.34	.20	.18	739	1142.9	203.5	-58.9
97.00	4.06	4.00	0.76	8.82	.22	.20	780	1143.7	189.4	-57.7
98.00	3.60	3.82	0.70	8.12	.26	.24	757	1144.4	177.9	-56.0
99.00	3.57	3.61	0.64	7.82	.28	.25	720	1145.0	168.7	-54.2
39100.00	3.64	3.37	0.58	7.59	.29	.26	743	1145.5	161.1	-52.1
01.00	3.93	3.06	0.53	7.51	.29	.27	748	1145.9	154.8	-50.0
02.00	4.54	2.64	0.47	7.65	.29	.26	765	1146.2	149.6	-47.9
03.00	5.06	2.05	0.41	7.52	.30	.27	740	1146.4	144.6	-45.4
04.00	5.72	1.05	0.36	7.13	.32	.30	716	1146.5	140.2	-43.0
05.00	7.83	0.32	0.33	8.48	.25	.23	786	1146.6	136.2	-40.4
06.00	6.73	0.01	0.30	9.04	.23	.21	800	1146.5	132.5	-37.9
07.00	8.15	0.00	0.28	8.43	.26	.24	774	1146.4	129.0	-35.3
08.00	7.26	0.00	0.26	7.52	.30	.28	749	1146.1	125.8	-32.7
09.00	7.26	0.00	0.24	7.50	.30	.27	779	1145.8	122.7	-30.1
10.00	7.25	0.00	0.23	7.48	.29	.27	783	1145.5	119.7	-27.5
11.00	7.38	0.00	0.22	7.60	.28	.26	792	1145.0	116.8	-24.9
12.00	7.45	0.00	0.21	7.66	.28	.26	782	1144.6	114.1	-22.3
13.00	7.61	0.00	0.20	7.81	.28	.26	768	1144.0	111.4	-19.7
14.00	6.04	0.00	0.19	8.23	.25	.23	803	1143.5	108.8	-17.2
15.00	7.84	0.00	0.19	8.03	.25	.23	804	1142.8	106.2	-14.7
16.00	7.58	0.00	0.18	7.76	.26	.24	791	1142.2	103.7	-12.2
17.00	6.96	0.00	0.18	7.14	.28	.27	757	1141.6	101.2	-9.8

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39118.00	7.36	0.00	0.18	7.54	-18.25	-18.24	791	1140.9	98.8	-7.4
19.00	7.74	0.00	0.19	7.93	.23	.21	793	1140.2	96.4	-5.0
20.00	7.84	0.00	0.19	8.03	.22	.20	772	1139.4	94.0	-2.8
21.00	8.05	0.00	0.21	8.26	.19	.18	801	1138.7	91.7	-0.5
22.00	8.08	0.00	0.22	8.30	.18	.17	806	1138.0	89.3	1.6
23.00	8.78	0.00	0.22	9.00	.13	.12	844	1137.2	87.0	3.7
24.00	8.81	0.00	0.23	9.04	.11	.10	856	1136.4	84.8	5.8
25.00	8.56	0.00	0.23	8.79	.11	.10	856	1135.6	82.5	7.7
26.00	7.97	0.00	0.24	8.21	.13	.12	844	1134.8	80.2	9.7
27.00	8.00	0.00	0.24	8.24	.12	.11	843	1134.0	78.0	11.5
28.00	8.31	0.00	0.24	8.55	.09	.09	852	1133.2	75.8	13.2
29.00	8.63	0.00	0.25	8.88	.06	.06	866	1132.3	73.6	14.9
30.00	9.52	0.00	0.26	9.78	.01	.01	895	1131.5	71.4	16.6
31.00	8.67	0.00	0.26	8.93	.04	.04	874	1130.7	69.2	18.1
32.00	8.50	0.00	0.26	8.76	.04	.04	871	1129.9	67.1	19.6
33.00	8.34	0.00	0.26	8.60	.04	.04	861	1129.1	64.9	21.0
34.00	8.92	0.00	0.24	9.16	.00	.00	882	1128.4	62.8	22.3
35.00	9.51	0.00	0.22	9.73	-17.96	-17.97	901	1127.6	60.7	23.6
36.00	8.26	-0.05	0.18	8.38	-18.02	-18.02	859	1126.9	58.5	24.8
37.00	8.25	0.24	0.14	8.64	.00	.00	874	1126.3	56.4	26.0
38.00	7.82	0.53	0.10	8.45	-17.99	.00	871	1125.7	54.3	27.0
39.00	7.90	0.73	0.06	8.69	.97	-17.98	881	1125.1	52.3	28.1
40.00	8.17	0.85	0.02	9.03	.95	.95	892	1124.6	50.2	29.1
41.00	8.39	0.96	-0.03	9.32	.92	.93	905	1124.2	48.1	30.0
42.00	8.58	1.05	-0.07	9.57	.90	.91	918	1123.9	46.0	30.9
43.00	8.79	1.15	-0.11	9.83	.88	.89	925	1123.6	44.0	31.8
44.00	9.19	1.18	-0.16	10.21	.86	.87	934	1123.5	41.9	32.7
45.00	9.73	1.22	-0.19	10.76	.83	.84	947	1123.4	39.8	33.6
46.00	10.17	1.27	-0.23	11.22	.81	.82	953	1123.4	37.8	34.4
39192.50	7.68	0.19	-0.41	7.47	-10.17	-18.14	729	1145.6	316.3	0.3
93.00	8.01	0.10	-0.40	7.70	.16	.13	739	1145.6	315.5	-0.7
93.50	8.32	0.00	-0.39	7.93	.15	.12	749	1145.7	314.7	-1.7
94.00	7.96	-0.05	-0.38	7.53	.17	.14	689	1145.8	314.0	-2.7
94.50	7.82	-0.08	-0.37	7.36	.18	.15	690	1145.8	313.2	-3.7
95.00	8.12	-0.11	-0.36	7.66	.16	.14	681	1145.9	312.5	-4.6
95.50	8.42	-0.13	-0.34	7.96	.15	.13	731	1145.9	311.7	-5.6
96.00	8.94	-0.15	-0.32	8.48	.13	.10	752	1146.0	311.0	-6.5
96.50	8.79	-0.16	-0.31	8.32	.14	.11	731	1146.0	310.2	-7.4
97.00	8.85	-0.16	-0.29	8.40	.13	.11	740	1146.1	309.4	-8.3
97.50	9.13	-0.16	-0.28	8.69	.12	.10	752	1146.1	308.7	-9.2
98.00	9.86	-0.14	-0.27	9.45	.08	.06	740	1146.1	307.9	-10.0
98.50	13.97	-0.12	-0.25	13.60	-17.92	-17.90	854	1146.2	307.1	-10.9
99.00	11.99	-0.10	-0.24	11.65	-18.00	.97	813	1146.2	306.3	-11.6
99.50	10.91	-0.06	-0.23	10.61	.04	-18.02	799	1146.2	305.5	-12.4
39200.00	10.27	-0.03	-0.21	10.03	.07	.04	779	1146.2	304.8	-13.1
00.50	9.86	-0.01	-0.20	9.65	.09	.06	766	1146.3	304.0	-13.8
01.00	9.90	0.00	-0.19	9.71	.09	.06	772	1146.3	303.2	-14.4
01.50	9.70	0.00	-0.17	9.53	.10	.07	765	1146.3	302.4	-15.0
02.00	9.96	0.00	-0.16	9.80	.08	.06	766	1146.3	301.6	-15.6
02.50	10.43	0.00	-0.14	10.29	.07	.04	781	1146.4	300.7	-16.1
03.00	10.91	0.00	-0.13	10.78	.05	.02	795	1146.4	299.9	-16.6
03.50	11.16	0.00	-0.12	11.04	.04	.01	792	1146.4	299.1	-17.0
04.00	16.35	0.00	-0.11	16.24	-17.87	-17.84	898	1146.4	298.2	-17.4
04.50	10.97	0.00	-0.10	10.87	-18.04	-18.02	775	1146.4	297.4	-17.8
05.00	10.08	0.00	-0.08	10.00	.09	.06	753	1146.5	296.5	-18.0
05.50	9.42	0.00	-0.07	9.35	.12	.09	728	1146.5	295.7	-18.3
06.00	10.10	0.00	-0.06	10.04	.09	.06	751	1146.5	294.8	-18.5
06.50	11.91	0.00	-0.05	11.86	.02	-17.99	800	1146.5	293.9	-18.6

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39207.00	12.82	0.00	-0.04	12.78	-17.99	-17.97	818	1146.5	293.0	-18.7
07.50	15.08	0.00	-0.04	15.04	.92	.89	852	1146.5	292.1	-18.7
08.00	14.41	0.00	-0.04	14.37	.94	.91	831	1146.5	291.2	-18.7
08.50	11.03	0.00	-0.03	11.00	-18.07	-18.04	764	1146.5	290.3	-18.6
09.00	10.81	0.00	-0.02	10.79	.09	.06	761	1146.6	289.4	-18.5
09.50	11.04	0.00	-0.02	11.02	.07	.05	755	1146.6	288.5	-18.4
10.00	10.59	0.00	-0.02	10.57	.09	.07	722	1146.6	287.5	-18.1
10.50	9.68	0.00	-0.02	9.66	.13	.11	694	1146.6	286.6	-17.8
11.00	9.46	0.00	-0.02	9.44	.15	.12	693	1146.6	285.6	-17.5
11.50	9.68	0.00	-0.02	9.66	.14	.11	682	1146.6	284.7	-17.1
12.00	11.25	0.00	-0.02	11.23	.08	.05	739	1146.6	283.7	-16.7
12.50	13.50	0.00	-0.02	13.48	.00	-17.97	792	1146.6	282.7	-16.2
13.00	12.37	0.00	-0.03	12.34	.04	-18.01	719	1146.6	281.7	-15.7
13.50	10.34	0.00	-0.04	10.30	.12	.10	693	1146.6	280.8	-15.1
14.00	10.11	0.00	-0.04	10.07	.15	.12	695	1146.6	279.8	-14.5
14.50	10.10	0.00	-0.04	10.06	.15	.12	694	1146.6	278.8	-13.8
15.00	10.55	0.00	-0.04	10.51	.14	.11	713	1146.6	277.7	-13.0
15.50	10.54	0.00	-0.04	10.50	.15	.12	715	1146.5	276.7	-12.3
16.00	10.09	0.00	-0.04	10.05	.17	.14	702	1146.5	275.7	-11.4
16.50	9.41	0.00	-0.03	9.38	.20	.17	653	1146.5	274.7	-10.6
17.00	11.21	0.00	-0.02	11.19	.12	.09	690	1146.5	273.6	-9.7
17.50	11.20	0.00	0.00	11.20	.12	.10	683	1146.5	272.6	-8.7
18.00	10.30	0.00	0.02	10.32	.17	.14	642	1146.5	271.5	-7.7
18.50	9.85	0.00	0.05	9.90	.19	.17	654	1146.5	270.5	-6.7
19.00	10.30	0.00	0.07	10.37	.18	.15	660	1146.5	269.4	-5.6
19.50	10.30	0.00	0.09	10.39	.18	.15	663	1146.5	268.4	-4.5
20.00	9.85	0.00	0.11	9.96	.20	.18	658	1146.4	267.3	-3.3
20.50	9.18	0.00	0.13	9.31	.24	.21	653	1146.4	266.2	-2.2
21.00	9.86	0.00	0.14	10.00	.21	.18	658	1146.4	265.1	-1.0
21.50	10.09	0.00	0.15	10.24	.20	.17	654	1146.4	264.1	0.3
22.00	12.80	0.00	0.16	12.96	.10	.07	743	1146.4	263.0	1.5
22.50	12.58	0.00	0.16	12.74	.11	.09	740	1146.4	261.9	2.8
23.00	12.14	0.00	0.16	12.30	.13	.11	730	1146.3	260.8	4.1
23.50	11.48	0.00	0.16	11.64	.16	.13	690	1146.3	259.7	5.5
24.00	11.27	0.00	0.16	11.43	.17	.14	668	1146.3	258.5	6.8
24.50	11.07	0.00	0.16	11.23	.18	.16	663	1146.3	257.4	8.2
25.00	10.86	0.00	0.16	11.02	.20	.17	688	1146.2	256.3	9.6
25.50	11.33	0.00	0.15	11.48	.18	.16	710	1146.2	255.2	11.0
26.00	11.58	0.00	0.15	11.73	.17	.15	718	1146.2	254.0	12.4
26.50	11.38	0.00	0.15	11.53	.18	.15	720	1146.1	252.9	13.8
27.00	11.41	0.00	0.14	11.55	.18	.16	726	1146.1	251.7	15.2
27.50	11.90	0.00	0.14	12.04	.16	.14	738	1146.0	250.5	16.6
28.00	12.16	0.00	0.13	12.29	.15	.13	741	1146.0	249.4	18.1
28.50	12.42	0.00	0.12	12.54	.14	.12	733	1145.9	248.2	19.5
29.00	12.91	0.00	0.12	13.03	.12	.10	737	1145.9	247.0	21.0
29.50	12.95	0.00	0.12	13.07	.13	.10	750	1145.8	245.8	22.4
30.00	12.55	0.00	0.11	12.66	.14	.12	742	1145.8	244.6	23.8
30.50	11.71	0.00	0.11	11.82	.17	.15	729	1145.7	243.3	25.3
31.00	11.76	0.00	0.10	11.86	.17	.15	746	1145.6	242.1	26.7
31.50	11.60	0.00	0.10	11.70	.18	.16	743	1145.5	240.8	28.1
32.00	11.21	0.00	0.09	11.30	.20	.17	729	1145.4	239.6	29.6
32.50	11.28	0.00	0.09	11.37	.19	.17	729	1145.3	238.3	31.0
33.00	11.35	0.00	0.09	11.44	.19	.16	730	1145.2	237.0	32.4
33.50	10.97	0.00	0.09	11.06	.20	.18	725	1145.1	235.6	33.8
34.00	11.05	0.00	0.09	11.14	.20	.17	739	1145.0	234.3	35.2
34.50	10.91	0.00	0.08	10.99	.20	.18	738	1144.9	232.9	36.6
35.00	10.78	0.00	0.08	10.86	.20	.18	738	1144.8	231.4	38.0
35.50	10.64	-0.05	0.08	10.67	.21	.18	720	1144.6	230.0	39.4
36.00	10.29	-0.22	0.08	10.15	.23	.20	687	1144.5	228.5	40.8
36.50	11.97	-0.41	0.08	11.63	.17	.14	760	1144.4	226.9	42.2

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39237.00	14.99	-0.56	0.08	14.51	-18.07	-18.05	829	1144.2	225.3	43.6
37.50	13.76	-0.73	0.08	13.10	.11	.09	789	1144.0	223.6	45.0
38.00	13.65	-0.90	0.08	12.83	.12	.09	787	1143.9	221.9	46.4
38.50	12.87	-1.06	0.09	11.90	.15	.13	765	1143.7	220.1	47.9
39.00	13.00	-1.22	0.09	11.87	.15	.13	773	1143.5	218.1	49.3
39.50	13.36	-1.37	0.09	12.08	.14	.12	789	1143.3	216.1	50.7
40.00	13.50	-1.50	0.09	12.09	.13	.11	794	1143.1	213.8	52.1
39241.00	13.80	-1.74	0.10	12.15	-18.13	-18.11	808	1142.7	209.3	54.6
42.00	13.24	-1.94	0.10	11.40	.15	.13	797	1142.3	204.6	56.5
43.00	13.11	-2.11	0.10	11.10	.15	.14	793	1141.8	199.5	58.3
44.00	13.00	-2.23	0.11	10.88	.16	.14	789	1141.4	193.8	59.9
45.00	13.54	-2.36	0.11	11.29	.14	.12	802	1140.9	187.2	61.4
46.00	14.32	-2.46	0.11	11.97	.11	.09	824	1140.3	179.5	62.6
47.00	15.07	-2.58	0.12	12.61	.08	.06	848	1139.8	170.5	63.7
48.00	14.94	-2.71	0.13	12.36	.08	.07	852	1139.2	159.9	64.6
49.00	14.99	-2.82	0.14	12.30	.08	.06	857	1138.6	147.6	65.1
50.00	14.38	-2.94	0.15	11.59	.10	.09	843	1138.1	134.0	65.3
51.00	14.41	-3.03	0.16	11.54	.09	.08	851	1137.5	119.9	65.1
52.00	14.28	-3.13	0.18	11.32	.10	.09	856	1136.8	106.2	64.6
53.00	14.21	-3.21	0.20	11.20	.10	.09	861	1136.2	93.9	63.7
54.00	14.31	-3.29	0.21	11.23	.09	.08	865	1135.6	83.2	62.6
55.00	14.43	-3.35	0.23	11.31	.08	.07	877	1134.9	74.2	61.2
56.00	14.77	-3.40	0.24	11.61	.07	.06	893	1134.3	66.4	59.8
57.00	14.99	-3.40	0.25	11.85	.05	.05	899	1133.6	59.8	58.3
58.00	15.16	-3.40	0.26	12.03	.05	.04	906	1133.0	54.1	56.7
59.00	15.50	-3.41	0.27	12.36	.03	.02	926	1132.3	49.0	55.1
60.00	15.78	-3.42	0.28	12.64	.01	.01	944	1131.6	44.5	53.5
61.00	15.93	-3.42	0.30	12.81	.00	.00	953	1131.0	40.3	51.8
62.00	16.13	-3.41	0.31	13.03	-17.99	-17.99	959	1130.3	36.5	50.2
63.00	16.38	-3.39	0.31	13.30	.98	.98	968	1129.7	33.0	48.6
64.00	16.56	-3.36	0.32	13.52	.97	.97	981	1129.0	29.6	46.9
65.00	16.72	-3.30	0.33	13.75	.96	.96	991	1128.4	26.5	45.3
66.00	16.70	-3.28	0.34	13.76	.96	.96	993	1127.8	23.5	43.8
67.00	16.60	-3.19	0.36	13.78	.95	.96	999	1127.2	20.6	42.2
68.00	15.98	-3.13	0.38	13.23	.96	.97	994	1126.6	17.8	40.7
69.00	15.61	-3.08	0.40	12.94	.97	.98	992	1126.6	15.1	39.1
39269.50	14.44	-3.07	0.40	11.77	-18.01	-18.02	967	1125.7	13.8	38.4
70.00	14.66	-2.99	0.41	12.08	.00	.01	974	1125.5	12.5	37.7
70.50	16.45	-2.97	0.42	13.90	-17.94	-17.95	1016	1125.2	11.2	36.9
71.00	17.78	-2.95	0.43	15.26	.90	.91	1042	1125.0	10.0	36.2
71.50	18.66	-2.88	0.44	16.22	.89	.90	1049	1124.7	8.7	35.5
72.00	23.11	-2.86	0.45	20.71	.79	.79	1115	1124.5	7.5	34.7
72.50	17.46	-2.78	0.45	15.13	.91	.92	1035	1124.2	6.2	34.0
73.00	16.97	-2.75	0.46	14.68	.91	.92	1039	1124.0	5.0	33.3
73.50	16.02	-2.68	0.47	13.81	.94	.95	1020	1123.8	3.8	32.6
74.00	15.28	-2.65	0.48	13.11	.97	.98	1004	1123.6	2.6	31.9
74.50	15.21	-2.56	0.48	13.13	.96	.97	1006	1123.4	1.4	31.2
75.00	14.68	-2.53	0.49	12.64	.98	.99	997	1123.2	0.2	30.5
75.50	14.59	-2.44	0.50	12.65	.98	.99	996	1123.0	359.1	29.9
76.00	14.94	-2.39	0.51	13.06	.98	.99	999	1122.9	357.9	29.2
76.50	17.97	-2.34	0.51	16.14	.89	.91	1053	1122.7	356.7	28.5
77.00	20.10	-2.24	0.52	18.38	.84	.85	1087	1122.6	355.6	27.8
77.50	17.27	-2.21	0.52	15.59	.91	.92	1047	1122.4	354.4	27.1
78.00	16.69	-2.13	0.52	15.07	.91	.92	1050	1122.3	353.3	26.4
78.50	15.19	-2.09	0.53	13.63	.96	.97	1016	1122.2	352.1	25.8
39279.00	14.75	-2.02	0.54	13.27	-17.97	-17.98	1009	1122.1	351.0	25.1
80.00	13.72	-1.90	0.55	12.37	-18.00	-18.01	990	1121.9	348.7	23.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39281.00	13.20	-1.71	0.57	12.06	-18.01	-18.02	982	1121.7	346.5	22.3
82.00	12.89	-1.57	0.59	11.91	.02	.03	978	1121.6	344.2	20.7
83.00	12.32	-1.37	0.61	11.56	.04	.05	968	1121.6	341.9	19.3
84.00	11.98	-1.17	0.63	11.45	.04	.06	963	1121.5	339.7	17.8
85.00	11.25	-1.01	0.65	10.90	.06	.08	951	1121.5	337.5	16.3
86.00	10.92	-0.83	0.67	10.76	.07	.08	948	1121.5	335.3	14.8
87.00	10.37	-0.63	0.69	10.44	.08	.10	938	1121.6	333.1	13.4
88.00	10.39	-0.44	0.71	10.67	.08	.09	939	1121.7	330.9	11.9
89.00	10.58	-0.28	0.72	11.03	.07	.09	943	1121.8	328.7	10.5
90.00	11.18	-0.13	0.73	11.78	.05	.06	962	1121.9	326.5	9.0
91.00	11.33	0.02	0.74	12.09	.04	.05	968	1122.0	324.4	7.6
92.00	11.16	0.21	0.75	12.12	.04	.05	964	1122.2	322.2	6.2
93.00	11.00	0.39	0.75	12.14	.04	.06	962	1122.3	320.1	4.8
94.00	10.96	0.56	0.76	12.28	.04	.05	964	1122.5	317.9	3.3
95.00	11.04	0.73	0.76	12.53	.04	.05	966	1122.7	315.8	1.9
96.00	10.63	0.88	0.76	12.27	.05	.06	954	1122.9	313.7	0.5
97.00	9.84	1.03	0.75	11.62	.08	.09	933	1123.1	311.6	-0.9
98.00	9.29	1.17	0.75	11.21	.10	.11	922	1123.3	309.4	-2.4
99.00	8.98	1.29	0.74	11.01	.11	.12	912	1123.4	307.3	-3.8
39300.00	9.13	1.39	0.74	11.26	.10	.11	910	1123.6	305.2	-5.3
01.00	9.24	1.48	0.73	11.45	.10	.11	905	1123.8	303.1	-6.8
02.00	8.36	1.54	0.72	10.62	.14	.15	880	1124.0	301.0	-8.3
03.00	7.89	1.59	0.72	10.20	.16	.16	871	1124.1	298.8	-9.9
04.00	7.38	1.62	0.71	9.71	.18	.19	855	1124.3	296.7	-11.5
05.00	7.67	1.62	0.69	9.99	.17	.18	857	1124.4	294.6	-13.2
06.00	7.98	1.60	0.67	10.26	.16	.17	858	1124.6	292.4	-14.9
07.00	8.26	1.58	0.66	10.50	.15	.16	860	1124.7	290.3	-16.7
08.00	8.50	1.51	0.64	10.65	.15	.15	860	1124.7	288.1	-18.5
09.00	8.37	1.37	0.61	10.35	.16	.17	848	1124.8	286.0	-20.4
10.00	8.37	1.17	0.58	10.12	.17	.18	836	1124.8	283.8	-22.4
11.00	8.34	0.92	0.55	9.81	.18	.19	821	1124.8	281.6	-24.5
12.00	8.33	0.63	0.52	9.48	.19	.20	808	1124.8	279.4	-26.7
13.00	8.96	0.29	0.50	9.75	.18	.19	812	1124.7	277.2	-29.0
14.00	9.90	0.00	0.47	10.37	.15	.16	822	1124.6	274.9	-31.4
39314.50	10.38	0.00	0.45	10.83	-18.12	-18.13	830	1124.5	273.8	-32.6
15.00	11.14	0.00	0.44	11.58	.09	.09	843	1124.4	272.7	-33.8
15.50	12.36	0.00	0.42	12.78	.04	.05	869	1124.3	271.6	-35.1
16.00	12.24	0.00	0.40	12.64	.04	.05	865	1124.2	270.4	-36.4
16.50	11.91	0.00	0.38	12.29	.05	.06	855	1124.1	269.3	-37.8
17.00	11.58	0.00	0.36	11.94	.06	.07	846	1123.9	268.1	-39.1
17.50	11.03	0.00	0.34	11.37	.09	.10	831	1123.8	266.9	-40.5
39318.00	11.05	0.00	0.32	11.37	-18.08	-18.09	830	1123.6	265.8	-42.0
19.00	10.16	0.00	0.28	10.44	.11	.12	805	1123.3	263.4	-44.9
20.00	10.03	0.00	0.24	10.27	.12	.13	797	1122.9	260.9	-48.0
21.00	10.32	0.00	0.20	10.52	.10	.11	800	1122.4	258.4	-51.2
22.00	10.63	0.13	0.16	10.92	.06	.08	807	1121.9	255.9	-54.5
23.00	10.48	0.30	0.12	10.90	.04	.05	807	1121.3	253.2	-57.9
24.00	10.08	0.42	0.08	10.58	.04	.05	799	1120.7	250.5	-61.5
25.00	9.82	0.51	0.04	10.36	.04	.05	794	1120.0	247.5	-65.5
26.00	10.27	0.49	-0.02	10.74	.00	.02	802	1119.2	244.4	-69.1
27.00	10.51	0.41	-0.06	10.86	-17.97	-17.99	809	1118.5	241.2	-72.7
28.00	10.48	0.28	-0.12	10.64	.96	.98	808	1117.6	237.7	-76.3
29.00	10.36	0.11	-0.18	10.29	.96	.98	803	1116.8	233.8	-79.9
30.00	10.60	-0.10	-0.23	10.27	.95	.97	806	1115.8	229.3	-83.5
31.00	10.69	-0.30	-0.28	10.11	.94	.96	807	1114.9	224.1	-87.0
32.00	11.19	-0.52	-0.34	10.33	.91	.94	817	1113.9	217.7	-90.4
33.00	11.95	-0.74	-0.39	10.82	.87	.89	836	1112.9	209.2	-93.6
34.00	12.62	-1.01	-0.44	11.17	.84	.86	850	1111.8	197.6	-96.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39335.00	13.21	-1.27	-0.50	11.44	-17.82	-17.85	861	1110.7	180.6	-98.8
36.00	13.67	-1.52	-0.56	11.59	.80	.83	870	1109.6	156.8	-100.0
37.00	14.16	-1.79	-0.62	11.74	.78	.82	881	1108.4	129.9	-99.7
38.00	14.52	-2.02	-0.68	11.82	.77	.81	890	1107.3	107.7	-97.9
39.00	15.09	-2.26	-0.73	12.10	.76	.79	903	1106.1	92.2	-95.3
40.00	15.70	-2.50	-0.79	12.41	.74	.78	917	1104.9	81.5	-92.3
41.00	16.07	-2.75	-0.85	12.47	.73	.77	926	1103.7	73.7	-89.1
42.00	16.38	-2.95	-0.90	12.53	.72	.76	934	1102.5	67.6	-85.9
43.00	16.01	-3.09	-0.96	11.96	.74	.78	928	1101.2	62.7	-82.7
44.00	15.69	-3.28	-1.01	11.40	.76	.80	921	1100.0	58.5	-79.6
45.00	15.87	-3.41	-1.06	11.40	.76	.81	927	1098.8	54.8	-76.5
46.00	16.00	-3.56	-1.10	11.34	.76	.81	930	1097.6	51.5	-73.6
47.00	16.07	-3.70	-1.14	11.23	.76	.81	931	1096.3	48.5	-70.8
48.00	16.03	-3.77	-1.18	11.08	.77	.82	931	1095.1	45.6	-68.1
49.00	15.83	-3.84	-1.22	10.77	.78	.84	926	1093.9	42.9	-65.5
50.00	15.36	-3.92	-1.24	10.20	.81	.86	915	1092.7	40.4	-63.1
51.00	14.73	-3.93	-1.26	9.54	.84	.90	901	1091.6	37.9	-60.8
52.00	14.23	-3.94	-1.29	9.00	.86	.92	888	1090.4	35.6	-58.5
53.00	14.30	-3.94	-1.32	9.04	.86	.92	893	1089.3	33.3	-56.4
54.00	14.89	-3.94	-1.34	9.61	.84	.90	912	1088.1	31.1	-54.4
55.00	16.01	-3.94	-1.36	10.71	.79	.86	944	1087.1	28.9	-52.5
56.00	16.81	-3.93	-1.38	11.50	.76	.83	962	1086.0	26.7	-50.7
57.00	17.46	-3.93	-1.39	12.14	.74	.81	978	1085.0	24.6	-48.9
58.00	18.15	-3.93	-1.41	12.81	.72	.79	997	1084.0	22.5	-47.1
59.00	18.75	-3.91	-1.42	13.42	.70	.77	1013	1083.1	20.5	-45.4
60.00	19.38	-3.83	-1.42	14.12	.68	.75	1025	1082.2	18.4	-43.7
61.00	20.15	-3.78	-1.43	14.94	.66	.74	1038	1081.4	16.3	-41.9
62.00	20.01	-3.71	-1.43	14.87	.67	.74	1037	1080.6	14.3	-40.1
63.00	19.09	-3.59	-1.42	14.08	.69	.77	1023	1079.9	12.2	-38.2
64.00	18.99	-3.42	-1.41	14.16	.69	.77	1024	1079.2	10.1	-36.2
65.00	18.76	-3.24	-1.40	14.13	.69	.77	1023	1078.6	8.1	-34.0
39365.50	18.76	-3.14	-1.39	14.23	-17.70	-17.78	1025	1078.4	6.7	-31.3
66.00	18.86	-2.94	-1.38	14.54	.69	.77	1029	1078.1	5.7	-30.1
66.50	19.64	-2.95	-1.36	15.32	.67	.75	1042	1077.9	4.6	-28.9
67.00	22.42	-2.86	-1.35	18.21	.60	.69	1087	1077.7	3.6	-27.7
67.50	22.74	-2.71	-1.34	18.69	.60	.69	1090	1077.5	2.6	-26.6
68.00	26.64	-2.60	-1.32	22.71	.52	.61	1143	1077.3	1.5	-25.5
68.50	21.81	-2.49	-1.30	18.02	.62	.71	1076	1077.2	0.5	-24.4
69.00	16.31	-2.39	-1.28	12.64	.77	.86	972	1077.0	359.5	-23.3
69.50	15.95	-2.28	-1.27	12.40	.78	.87	964	1076.9	358.5	-22.2
70.00	15.37	-2.19	-1.25	11.93	.80	.89	948	1076.8	357.4	-21.1
70.50	15.45	-2.07	-1.23	12.15	.80	.88	954	1076.8	356.4	-20.0
71.00	15.54	-1.94	-1.22	12.37	.79	.88	957	1076.7	355.4	-19.0
71.50	17.86	-1.82	-1.20	14.64	.72	.81	1004	1076.7	354.4	-17.9
72.00	26.88	-1.72	-1.18	23.98	.52	.61	1137	1076.7	353.4	-16.9
72.50	23.61	-1.58	-1.15	20.88	.59	.68	1093	1076.7	352.4	-15.8
73.00	16.53	-1.48	-1.13	13.93	.76	.84	977	1076.7	351.4	-14.8
73.50	15.94	-1.35	-1.11	13.48	.77	.85	971	1076.7	350.4	-13.8
74.00	15.79	-1.24	-1.08	13.47	.77	.86	967	1076.8	349.4	-12.8
74.50	15.42	-1.13	-1.06	13.24	.79	.87	956	1076.8	348.4	-11.8
75.00	14.83	-1.02	-1.04	12.77	.80	.89	944	1076.9	347.4	-10.8
75.50	14.46	-0.88	-1.01	12.57	.81	.90	939	1077.0	346.4	-9.8
76.00	14.76	-0.76	-0.99	13.00	.80	.89	944	1077.2	345.4	-8.8
76.50	15.50	-0.67	-0.96	13.88	.78	.86	956	1077.3	344.4	-7.8
77.00	15.58	-0.55	-0.94	14.09	.78	.86	958	1077.5	343.5	-6.8
77.50	15.43	-0.42	-0.91	14.10	.78	.86	959	1077.6	342.5	-5.8
78.00	15.28	-0.31	-0.89	14.09	.78	.86	956	1077.8	341.5	-4.8
78.50	14.91	-0.18	-0.86	13.87	.79	.87	949	1078.0	340.5	-3.8

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39379.00	14.77	-0.06	-0.84	13.86	-17.79	-17.87	948	1078.2	339.5	-2.9
80.00	14.31	0.18	-0.79	13.70	.80	.88	942	1078.7	337.5	-0.9
81.00	14.07	0.44	-0.74	13.77	.80	.88	940	1079.2	335.5	1.1
82.00	14.40	0.67	-0.69	14.38	.79	.87	947	1079.7	333.6	3.0
83.00	14.74	0.91	-0.64	15.01	.77	.85	950	1080.3	331.6	5.0
84.00	14.80	1.14	-0.58	15.35	.77	.85	948	1080.8	329.6	7.0
85.00	15.43	1.37	-0.52	16.28	.75	.83	961	1081.5	327.6	9.0
86.00	15.39	1.56	-0.48	16.47	.75	.82	961	1082.1	325.6	11.0
87.00	15.47	1.75	-0.42	16.81	.74	.82	961	1082.7	323.6	13.0
88.00	15.46	1.93	-0.37	17.02	.74	.82	954	1083.4	321.6	15.0
89.00	14.16	2.12	-0.32	15.97	.78	.85	928	1084.0	319.6	17.1
90.00	13.22	2.28	-0.26	15.24	.80	.87	911	1084.7	317.6	19.2
91.00	12.57	2.42	-0.21	14.78	.82	.89	896	1085.3	315.6	21.3
92.00	11.76	2.55	-0.16	14.15	.84	.91	873	1085.9	313.5	23.4
93.00	11.41	2.64	-0.11	13.95	.85	.92	863	1086.6	311.5	25.6
94.00	10.97	2.75	-0.06	13.66	.87	.94	849	1087.2	309.4	27.8
95.00	10.49	2.74	-0.01	13.22	.89	.95	829	1087.8	307.3	30.0
96.00	10.25	2.72	0.04	13.01	.90	.96	815	1088.3	305.2	32.2
97.00	9.92	2.62	0.08	12.62	.91	.98	801	1088.9	303.1	34.5
98.00	9.83	2.51	0.13	12.46	.92	.99	791	1089.4	300.9	36.8
99.00	9.75	2.29	0.17	12.22	.93	-18.00	783	1089.9	298.7	39.2
39400.00	9.76	1.92	0.20	11.88	.95	.02	776	1090.3	296.5	41.5
01.00	10.96	1.24	0.23	12.43	.93	.00	785	1090.7	294.3	43.9
39401.50	12.52	0.79	0.24	13.54	-17.89	-17.96	803	1090.9	293.1	45.1
02.00	13.19	0.24	0.25	13.68	.89	.95	803	1091.1	292.0	46.4
02.50	13.86	0.00	0.26	14.12	.87	.94	807	1091.2	290.8	47.6
03.00	16.29	0.00	0.26	16.55	.79	.86	844	1091.4	289.8	48.3
03.50	16.70	0.00	0.27	16.97	.78	.84	845	1091.5	288.6	49.6
04.00	16.66	0.00	0.28	16.94	.78	.85	845	1091.6	287.4	50.8
04.50	16.40	0.00	0.28	16.68	.79	.85	840	1091.7	286.2	52.1
05.00	15.67	0.00	0.29	15.96	.81	.87	827	1091.8	284.9	53.4
05.50	13.82	0.00	0.30	14.12	.86	.93	796	1091.8	283.7	54.8
06.00	13.09	0.00	0.30	13.39	.89	.95	780	1091.9	282.4	56.1
06.50	12.56	0.00	0.30	12.86	.90	.97	767	1091.9	281.0	57.5
07.00	12.93	0.00	0.31	13.24	.89	.95	775	1091.9	279.7	58.8
07.50	13.73	0.00	0.31	14.04	.86	.92	786	1091.9	278.3	60.2
08.00	14.53	0.00	0.31	14.84	.83	.90	800	1091.9	276.9	61.6
39409.00	15.72	0.00	0.31	16.03	-17.80	-17.86	818	1091.7	273.9	64.4
10.00	16.22	0.00	0.31	16.53	.77	.84	824	1091.6	270.7	67.3
11.00	16.76	0.00	0.30	17.06	.75	.82	829	1091.3	267.2	70.2
12.00	17.17	0.00	0.29	17.46	.73	.80	834	1090.9	263.4	73.1
39413.00	17.79	0.00	0.26	18.05	-17.71	-17.78	842	1090.4	259.1	75.9
13.50	18.32	0.00	0.25	18.57	.69	.76	848	1090.2	256.8	77.4
14.00	19.73	0.00	0.24	19.97	.65	.72	865	1089.9	254.2	78.8
14.50	22.04	0.00	0.22	22.26	.60	.66	892	1089.6	251.5	80.2
15.00	19.88	0.00	0.20	20.08	.64	.70	863	1089.3	248.5	81.6
15.50	16.17	0.00	0.18	18.35	.68	.75	841	1089.0	245.2	83.0
16.00	17.58	0.00	0.16	17.74	.69	.76	833	1088.6	241.5	84.3
39417.00	17.60	0.00	0.12	17.72	-17.68	-17.76	831	1087.8	232.6	86.8
18.00	17.46	0.00	0.09	17.55	.68	.75	828	1087.0	221.1	89.1
19.00	17.27	0.00	0.03	17.30	.68	.75	824	1086.1	205.9	91.0
20.00	16.96	0.00	-0.02	16.94	.68	.76	819	1085.1	187.1	92.2
21.00	17.05	0.00	-0.06	16.99	.67	.75	819	1084.1	166.5	92.5
22.00	17.09	0.00	-0.10	16.99	.66	.74	818	1083.0	147.8	92.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39422.50	17.84	0.00	-0.12	17.72	-17.63	-17.72	828	1082.4	139.8	91.5
23.00	19.92	0.00	-0.14	19.78	.58	.66	854	1081.8	132.7	90.8
23.50	20.23	0.00	-0.15	20.08	.57	.65	857	1081.3	126.6	90.1
24.00	20.76	0.00	-0.17	20.59	.56	.64	863	1080.7	121.3	89.2
24.50	18.65	0.00	-0.18	18.67	.60	.68	838	1080.1	116.6	88.3
25.00	16.71	0.00	-0.20	16.51	.65	.74	809	1079.4	112.5	87.4
25.50	16.36	0.00	-0.22	16.14	.66	.75	805	1078.8	108.8	86.4
26.00	16.24	0.00	-0.23	16.01	.66	.75	803	1078.2	105.5	85.3
26.50	16.35	0.00	-0.24	16.11	.65	.75	805	1077.6	102.5	84.3
27.00	16.91	0.00	-0.26	16.65	.64	.73	814	1076.9	99.7	83.2
39428.00	17.37	0.00	-0.28	17.09	-17.62	-17.71	823	1075.7	94.8	81.0
29.00	20.14	0.00	-0.30	19.84	.54	.64	861	1074.4	90.5	78.8
30.00	21.21	0.00	-0.32	20.89	.52	.61	872	1073.1	86.6	76.5
31.00	21.69	-0.82	-0.32	20.55	.52	.62	873	1071.8	83.1	74.3
32.00	22.25	-1.73	-0.34	20.18	.52	.62	872	1070.5	79.8	72.0
33.00	22.07	-2.38	-0.35	19.34	.54	.64	865	1069.2	76.7	69.7
34.00	22.15	-2.89	-0.35	18.91	.54	.65	864	1067.9	73.8	67.5
35.00	22.48	-3.31	-0.36	18.80	.54	.65	866	1066.7	71.0	65.3
36.00	22.85	-3.66	-0.36	18.83	.54	.65	873	1065.5	68.4	63.1
37.00	23.21	-3.92	-0.35	18.94	.53	.65	879	1064.3	65.8	60.9
38.00	23.49	-4.17	-0.34	18.98	.53	.64	884	1063.1	63.2	58.8
39.00	23.94	-4.39	-0.34	19.21	.52	.64	892	1062.0	60.8	56.7
40.00	24.49	-4.56	-0.33	19.60	.52	.64	899	1060.9	58.3	54.7
41.00	24.97	-4.68	-0.32	19.97	.51	.63	909	1059.8	56.0	52.7
42.00	25.46	-4.76	-0.31	20.39	.50	.63	920	1058.8	53.6	50.8
43.00	26.38	-4.81	-0.29	21.28	.49	.61	934	1057.9	51.6	50.2
44.00	27.22	-4.85	-0.28	22.09	.47	.59	951	1057.0	49.4	48.8
45.00	28.21	-4.86	-0.27	23.07	.45	.58	966	1056.1	47.2	47.4
46.00	29.07	-4.85	-0.25	23.97	.44	.57	980	1055.3	45.0	45.9
47.00	29.70	-4.82	-0.23	24.64	.43	.56	991	1054.6	42.8	44.5
48.00	30.09	-4.80	-0.20	25.09	.43	.56	998	1053.9	40.6	43.1
49.00	29.69	-4.78	-0.18	24.73	.44	.57	998	1053.4	38.4	41.6
50.00	29.07	-4.73	-0.14	24.20	.45	.58	998	1052.9	36.3	40.2
51.00	27.82	-4.66	-0.12	23.04	.47	.61	989	1052.4	34.1	38.7
52.00	27.14	-4.57	-0.08	22.49	.48	.62	989	1052.1	31.9	37.3
53.00	26.89	-4.45	-0.05	22.39	.49	.63	991	1051.9	29.8	35.8
54.00	26.71	-4.28	-0.02	22.41	.50	.64	994	1051.7	27.6	34.4
55.00	26.98	-4.14	0.02	22.86	.50	.64	1002	1051.7	25.4	32.9
56.00	27.76	-3.95	0.06	23.86	.49	.63	1017	1051.7	23.2	31.4
57.00	28.60	-3.82	0.09	24.86	.48	.61	1033	1051.9	21.1	29.9
58.00	30.00	-3.66	0.12	26.46	.46	.60	1051	1052.2	18.9	28.4
59.00	28.64	-3.50	0.14	25.28	.49	.63	1039	1052.5	16.7	26.9
39459.50	27.67	-3.41	0.16	24.42	-17.51	-17.65	1031	1052.8	15.7	26.2
60.00	27.36	-3.31	0.17	24.21	.52	.66	1027	1053.0	14.6	25.4
60.50	26.14	-3.22	0.18	23.10	.55	.68	1017	1053.3	13.5	24.6
61.00	25.14	-3.13	0.20	22.21	.57	.70	1009	1053.6	12.4	23.9
61.50	24.35	-3.03	0.21	21.54	.58	.71	1004	1054.0	11.3	23.1
62.00	22.44	-2.92	0.22	19.74	.62	.75	983	1054.3	10.2	22.3
62.50	21.20	-2.79	0.23	18.63	.65	.78	969	1054.7	9.1	21.6
63.00	21.27	-2.68	0.25	18.85	.65	.78	974	1055.1	8.0	20.8
63.50	26.69	-2.56	0.26	24.39	.55	.68	1044	1055.6	6.9	20.0
64.00	27.19	-2.44	0.27	25.02	.54	.68	1050	1056.1	5.8	19.2
64.50	27.03	-2.34	0.28	24.97	.55	.68	1052	1056.6	4.7	18.4
65.00	25.74	-2.23	0.30	23.81	.57	.70	1041	1057.1	3.6	17.6
65.50	24.01	-2.11	0.31	22.20	.61	.74	1025	1057.6	2.5	16.8
66.00	21.82	-2.01	0.32	20.13	.65	.78	1001	1058.2	1.4	16.0
66.50	21.63	-1.90	0.34	20.07	.66	.78	1004	1058.8	0.3	15.2
67.00	21.88	-1.78	0.35	20.44	.65	.78	1010	1059.4	359.2	14.4

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39467.50	22.34	-1.65	0.36	21.05	-17.65	-17.77	1020	1060.1	358.1	13.6
68.00	22.60	-1.54	0.38	21.64	.64	.76	1028	1060.7	357.0	12.8
68.50	23.26	-1.40	0.39	22.24	.63	.75	1037	1061.4	355.9	12.0
69.00	23.93	-1.30	0.41	23.04	.62	.74	1050	1062.1	354.8	11.1
69.50	24.37	-1.19	0.42	23.61	.62	.74	1057	1062.8	353.7	10.3
70.00	24.59	-1.06	0.44	23.97	.62	.74	1063	1063.6	352.6	9.5
70.50	24.81	-0.96	0.45	24.31	.62	.74	1069	1064.3	351.5	8.6
71.00	25.02	-0.85	0.46	24.63	.61	.74	1074	1065.1	350.4	7.8
71.50	25.90	-0.74	0.48	25.64	.60	.72	1086	1065.9	349.2	6.9
72.00	27.22	-0.63	0.49	27.08	.58	.71	1100	1066.7	348.1	6.1
72.50	32.09	-0.52	0.50	32.07	.52	.65	1144	1067.5	347.0	5.2
73.00	34.52	-0.40	0.51	34.63	.49	.62	1163	1068.3	345.9	4.3
73.50	35.16	-0.27	0.52	35.42	.48	.61	1169	1069.2	344.8	3.5
74.00	33.58	-0.14	0.53	33.97	.50	.64	1163	1070.0	343.6	2.6
74.50	28.44	-0.01	0.54	28.97	.58	.71	1121	1070.9	342.5	1.7
75.00	27.08	0.11	0.55	27.74	.61	.73	1107	1071.8	341.4	0.8
75.50	27.05	0.22	0.56	27.84	.62	.73	1108	1072.6	340.2	-0.1
76.00	26.36	0.34	0.57	27.27	.64	.74	1103	1073.5	339.1	-1.0
76.50	25.00	0.46	0.58	26.03	.66	.76	1091	1074.4	337.9	-1.9
77.00	24.52	0.62	0.58	25.72	.67	.77	1088	1075.3	336.8	-2.8
77.50	23.16	0.72	0.59	24.47	.70	.80	1075	1076.2	335.6	-3.7
78.00	22.47	0.84	0.60	23.90	.72	.81	1070	1077.1	334.5	-4.6
78.50	21.55	0.95	0.60	23.09	.74	.82	1062	1078.0	333.3	-5.5
79.00	20.41	1.05	0.61	22.07	.76	.84	1051	1078.9	332.1	-6.5
79.50	19.72	1.06	0.61	21.39	.78	.86	1043	1079.8	331.0	-7.4
80.00	19.48	1.26	0.62	21.36	.79	.87	1039	1080.7	329.8	-8.4
80.50	18.57	1.37	0.62	20.56	.81	.90	1027	1081.6	328.6	-9.3
81.00	17.66	1.47	0.62	19.74	.84	.91	1017	1082.5	327.4	-10.3
81.50	16.31	1.52	0.62	18.45	.87	.95	998	1083.4	326.2	-11.2
82.00	15.63	1.60	0.62	17.85	.89	.97	989	1084.3	325.0	-12.2
82.50	15.40	1.70	0.62	17.72	.90	.97	989	1085.1	323.8	-13.2
83.00	15.17	1.79	0.61	17.57	.90	.98	988	1086.0	322.6	-14.2
83.50	16.05	1.89	0.61	18.55	.89	.96	1002	1086.9	321.4	-15.2
84.00	16.50	1.96	0.61	19.07	.88	.95	1012	1087.7	320.2	-16.2
84.50	16.50	2.07	0.60	19.17	.88	.95	1014	1088.6	318.9	-17.2
85.00	17.18	2.15	0.60	19.92	.87	.94	1024	1089.4	317.7	-18.2
85.50	17.42	2.23	0.59	20.24	.87	.93	1028	1090.3	316.5	-19.2
86.00	17.21	2.33	0.59	20.13	.87	.94	1026	1091.1	315.2	-20.2
86.50	17.68	2.39	0.58	20.65	.87	.93	1033	1091.9	313.9	-21.3
87.00	17.49	2.44	0.57	20.50	.87	.93	1033	1092.7	312.6	-22.3
87.50	16.64	2.53	0.56	19.72	.89	.95	1025	1093.5	311.3	-23.4
88.00	16.01	2.56	0.55	19.12	.90	.96	1019	1094.2	310.0	-24.4
88.50	14.95	2.63	0.54	18.12	.93	.98	1007	1095.0	308.7	-25.5
89.00	13.67	2.67	0.00	16.34	.97	-18.03	980	1095.7	307.3	-26.6
89.50	13.87	2.71	0.52	17.10	.95	.01	996	1096.4	305.9	-27.8
90.00	14.80	2.75	0.50	18.05	.93	-17.98	1013	1097.1	304.5	-28.8
90.50	16.52	2.76	0.49	19.77	.89	.94	1041	1097.8	303.1	-29.9
91.00	18.12	2.77	0.48	21.37	.86	.91	1062	1098.5	301.7	-30.9
91.50	19.62	2.78	0.46	22.86	.84	.89	1078	1099.1	300.3	-31.9
92.00	20.35	2.78	0.44	23.58	.83	.88	1086	1099.7	298.9	-33.0
92.50	20.10	2.76	0.42	23.28	.83	.88	1085	1100.3	297.4	-34.0
93.00	20.20	2.75	0.40	23.35	.83	.88	1089	1100.9	295.9	-35.0
93.50	20.00	2.69	0.38	23.06	.84	.89	1085	1101.4	294.4	-36.1
94.00	20.37	2.63	0.36	23.37	.83	.88	1090	1101.9	292.8	-37.1
94.50	20.67	2.54	0.34	23.55	.83	.87	1096	1102.4	291.2	-38.2
95.00	20.67	2.39	0.32	23.38	.83	.88	1095	1102.9	289.6	-39.2
95.50	20.37	2.21	0.30	22.86	.84	.89	1090	1103.3	287.9	-40.2
96.00	21.12	1.94	0.28	23.35	.83	.88	1096	1103.7	286.1	-41.3
96.50	21.81	1.65	0.25	23.71	.82	.87	1101	1104.1	284.3	-42.3
97.00	22.22	1.22	0.23	23.67	.82	.87	1101	1104.5	282.5	-43.4

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39497.50	29.67	0.53	0.20	30.41	-17.71	-17.76	1165	1104.8	280.5	-44.4
39497.80	36.98	0.00	0.19	37.17	-17.62	-17.67	1214	1104.9	279.3	-45.0
98.00	39.69	0.00	0.18	39.87	.59	.64	1231	1105.1	278.5	-45.5
98.20	43.79	0.00	0.18	43.97	.54	.60	1254	1105.2	277.7	-45.9
98.40	40.93	0.00	0.17	41.10	.57	.62	1243	1105.3	276.8	-46.3
98.60	39.46	0.00	0.17	39.63	.58	.64	1235	1105.3	275.9	-46.7
98.80	36.59	0.00	0.16	36.75	.62	.67	1214	1105.4	275.0	-47.1
99.00	30.94	0.00	0.16	31.10	.70	.75	1173	1105.5	274.1	-47.5
99.20	30.84	0.00	0.15	30.99	.71	.75	1172	1105.6	273.2	-48.0
99.40	26.57	0.00	0.14	26.71	.77	.81	1135	1105.7	272.3	-48.4
39499.50	23.29	0.00	0.14	23.43	-17.83	-17.87	1101	1105.7	271.8	-48.6
39500.00	21.44	0.00	0.14	21.58	.86	.90	1080	1105.9	269.3	-49.6
00.50	19.77	0.00	0.12	19.89	.90	.94	1060	1106.0	266.6	-50.6
01.00	19.19	0.00	0.11	19.30	.91	.95	1052	1106.1	263.7	-51.7
01.50	19.04	0.00	0.10	19.14	.91	.95	1048	1106.1	260.6	-52.7
02.00	19.31	0.00	0.10	19.41	.90	.95	1053	1106.1	257.1	-53.7
02.50	19.12	0.00	0.09	19.21	.91	.95	1053	1106.1	253.4	-54.6
03.00	19.81	0.00	0.08	19.89	.89	.93	1065	1106.0	249.3	-55.6
39503.40	20.81	0.00	0.08	20.89	-17.87	-17.91	1077	1105.9	245.7	-56.3
03.60	22.03	0.00	0.07	22.10	.84	.89	1091	1105.9	243.7	-56.6
03.80	26.02	0.00	0.07	26.09	.77	.81	1134	1105.9	241.7	-57.0
04.00	27.24	0.00	0.07	27.31	.75	.79	1146	1105.8	239.6	-57.3
04.20	31.23	0.00	0.07	31.30	.68	.73	1182	1105.7	237.4	-57.6
04.40	33.84	0.00	0.07	33.91	.63	.69	1207	1105.7	235.1	-57.9
04.60	29.51	0.00	0.07	29.58	.70	.75	1170	1105.6	232.7	-58.2
04.80	19.63	0.00	0.07	19.70	.89	.93	1059	1105.5	230.2	-58.5
05.00	18.08	0.00	0.06	18.14	.92	.96	1039	1105.4	227.5	-58.8
39505.50	18.18	0.00	0.06	18.24	-17.92	-17.96	1040	1105.2	220.5	-59.4
06.00	16.24	0.00	0.06	16.30	.97	-18.01	1007	1104.9	212.7	-60.0
06.50	14.33	0.00	0.05	14.38	-18.02	.06	969	1104.6	204.4	-60.3
07.00	13.10	0.00	0.05	13.15	.06	.10	945	1104.3	195.6	-60.6
07.50	12.56	0.00	0.05	12.61	.07	.11	936	1103.9	186.7	-60.6
08.00	13.84	0.00	0.05	13.89	.03	.07	965	1103.5	178.0	-60.6
08.50	14.48	0.00	0.05	14.53	.01	.05	979	1103.0	169.6	-60.3
09.00	14.28	0.00	0.05	14.33	.01	.05	974	1102.6	161.9	-60.0
09.50	14.57	0.00	0.06	14.63	.00	.04	981	1102.0	154.8	-59.5
10.00	15.12	0.00	0.06	15.18	-17.98	.03	992	1101.5	148.5	-58.9
10.50	16.62	0.00	0.06	16.68	.94	-17.99	1016	1100.9	142.8	-58.2
11.00	17.28	0.00	0.06	17.34	.92	.97	1026	1100.3	137.7	-57.5
11.50	17.79	0.00	0.06	17.85	.90	.96	1035	1099.7	133.1	-56.7
12.00	17.92	0.00	0.06	17.98	.90	.95	1040	1099.0	129.0	-55.8
12.50	19.00	0.00	0.06	19.06	.87	.92	1058	1098.3	125.3	-54.9
13.00	19.71	0.00	0.06	19.77	.85	.90	1068	1097.6	122.0	-54.0
13.50	20.06	0.00	0.06	20.12	.84	.89	1073	1096.9	118.9	-53.1
14.00	20.71	0.00	0.06	20.77	.82	.88	1082	1096.1	116.0	-52.2
14.50	20.78	0.00	0.06	20.84	.81	.87	1084	1095.3	113.4	-51.2
15.00	20.72	0.00	0.06	20.78	.81	.87	1084	1094.5	110.9	-50.2
15.50	21.42	0.00	0.08	21.50	.79	.86	1092	1093.7	108.6	-49.2
16.00	22.00	0.00	0.08	22.08	.78	.84	1099	1092.8	106.4	-48.2
16.50	22.23	0.00	0.09	22.32	.77	.84	1102	1091.9	104.3	-47.3
17.00	22.35	0.00	0.10	22.45	.76	.83	1104	1091.0	102.3	-46.3
17.50	22.72	0.00	0.11	22.83	.75	.82	1109	1090.1	100.5	-45.3
18.00	24.47	0.00	0.12	24.59	.71	.79	1128	1089.2	98.7	-44.3
18.50	27.94	0.00	0.12	28.06	.65	.73	1162	1088.2	96.9	-43.3
19.00	27.14	0.00	0.12	27.26	.65	.74	1155	1087.2	95.3	-42.4
19.50	26.74	0.00	0.13	26.87	.66	.74	1151	1086.2	93.6	-41.4

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39520.00	27.18	0.00	0.13	27.31	-17.65	-17.73	1155	1085.2	92.1	-40.4
20.50	27.57	0.00	0.14	27.71	.64	.72	1159	1084.2	90.5	-39.5
21.00	27.47	0.00	0.14	27.61	.63	.72	1158	1083.2	89.0	-38.5
21.50	27.77	0.00	0.14	27.91	.62	.71	1161	1082.2	87.6	-37.5
22.00	28.03	0.00	0.14	28.17	.61	.71	1163	1081.1	86.2	-36.6
22.50	28.03	0.00	0.13	28.16	.61	.70	1164	1080.1	84.8	-35.7
23.00	27.99	0.00	0.13	28.12	.60	.70	1163	1079.0	83.4	-34.7
23.50	28.58	0.00	0.12	28.70	.59	.69	1168	1077.9	82.1	-33.8
24.00	29.36	0.00	0.11	29.47	.57	.67	1174	1076.8	80.7	-32.9
24.50	29.66	0.00	0.09	29.75	.56	.66	1176	1075.7	79.4	-32.0
25.00	30.14	0.00	0.08	30.22	.55	.65	1179	1074.6	78.1	-31.1
25.50	31.05	0.00	0.06	31.11	.53	.64	1186	1073.5	76.9	-30.2
26.00	31.70	0.00	0.04	31.74	.52	.63	1192	1072.4	75.6	-29.3
26.50	32.11	0.00	0.01	32.12	.50	.63	1195	1071.3	74.4	-28.4
27.00	32.49	0.00	-0.02	32.47	.50	.61	1197	1070.2	73.2	-27.6
27.50	32.84	0.00	-0.04	32.80	.48	.60	1200	1069.1	72.0	-26.7
39527.80	28.98	0.00	-0.06	28.92	-17.53	-17.44	1171	1068.4	71.2	-26.2
28.00	30.41	0.00	-0.07	30.34	.51	.42	1183	1067.9	70.8	-25.9
28.20	33.22	0.00	-0.08	33.14	.47	.38	1204	1067.5	70.3	-25.5
28.40	34.64	0.00	-0.10	34.54	.45	.36	1213	1067.0	69.8	-25.2
28.60	38.83	0.00	-0.11	38.72	.40	.31	1238	1066.6	69.3	-24.9
28.80	48.55	0.00	-0.12	48.43	.29	.20	1287	1066.1	68.9	-24.5
29.00	54.12	0.00	-0.13	53.99	.23	.13	1317	1065.7	68.4	-24.2
29.20	54.15	0.00	-0.14	54.01	.21	.11	1324	1065.2	67.9	-23.9
29.40	51.40	0.00	-0.15	51.25	.23	.13	1314	1064.8	67.5	-23.5
29.60	50.03	0.00	-0.16	49.87	.25	.15	1306	1064.3	67.0	-23.2
29.80	43.12	0.00	-0.17	42.95	.31	.22	1273	1063.9	66.5	-22.9
30.00	40.37	0.00	-0.18	40.19	.34	.25	1258	1063.4	66.1	-22.5
30.20	29.30	0.00	-0.19	29.11	.48	.39	1184	1063.0	65.6	-22.2
39530.50	31.03	0.00	-0.21	30.82	-17.47	-17.38	1191	1062.3	64.9	-21.7
31.00	29.94	0.00	-0.24	29.70	.48	.41	1179	1061.2	63.8	-20.9
31.50	29.29	-0.27	-0.27	28.75	.49	.42	1170	1060.1	62.6	-20.1
32.00	30.39	-0.79	-0.30	29.31	.48	.41	1175	1058.9	61.5	-19.3
32.50	31.93	-1.04	-0.32	30.57	.45	.38	1185	1057.8	60.4	-18.6
33.00	30.81	-1.18	-0.35	29.28	.47	.40	1174	1056.7	59.3	-17.8
33.50	29.91	-1.26	-0.37	28.27	.48	.42	1164	1055.6	58.2	-17.0
34.00	29.67	-1.29	-0.40	27.98	.48	.42	1161	1054.5	57.1	-16.3
34.50	30.76	-1.31	-0.43	29.02	.46	.40	1169	1053.4	56.0	-15.5
35.00	31.18	-1.37	-0.45	29.36	.45	.40	1172	1052.3	54.9	-14.8
35.50	31.83	-1.37	-0.48	29.98	.43	.38	1176	1051.2	53.8	-14.0
36.00	32.48	-1.37	-0.50	30.61	.42	.37	1180	1050.1	52.7	-13.3
36.50	32.70	-1.37	-0.52	30.81	.41	.37	1181	1049.1	51.7	-12.6
39536.80	31.98	-1.37	-0.53	30.08	-17.42	-17.38	1176	1048.4	51.0	-12.1
37.00	33.36	-1.37	-0.54	31.45	.40	.36	1185	1048.0	50.6	-11.9
37.20	34.75	-1.36	-0.54	32.85	.37	.33	1197	1047.6	50.2	-11.6
37.40	36.14	-1.35	-0.55	34.24	.35	.30	1208	1047.2	49.7	-11.3
37.60	47.22	-1.34	-0.56	45.32	.22	.17	1274	1046.8	49.3	-11.0
37.80	52.77	-1.32	-0.57	50.88	.16	.11	1302	1046.4	48.9	-10.7
38.00	45.86	-1.31	-0.58	43.97	.23	.19	1265	1045.9	48.5	-10.4
38.20	34.80	-1.30	-0.58	32.92	.36	.32	1198	1045.5	48.0	-10.2
38.40	33.43	-1.29	-0.59	31.55	.38	.34	1187	1045.1	47.6	-9.9
38.60	33.44	-1.27	-0.60	31.57	.38	.34	1186	1044.7	47.2	-9.6
38.80	30.69	-1.24	-0.60	28.85	.41	.38	1164	1044.3	46.8	-9.3
39539.00	30.61	-1.21	-0.60	28.79	-17.42	-17.38	1163	1043.9	46.3	-9.0
39.50	30.67	-1.15	-0.61	28.91	.41	.38	1162	1042.9	45.3	-8.3
40.00	29.65	-1.09	-0.62	27.93	.42	.40	1153	1042.0	44.2	-7.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39540.50	2.86	-0.11	-0.06	2.70	-17.43	-17.41	1144	1041.0	43.2	-7.0
41.00	2.88	-0.10	-0.06	2.71	.43	.40	1144	1040.1	42.1	-6.3
41.50	3.02	-0.10	-0.06	2.86	.40	.38	1156	1039.2	41.1	-5.6
42.00	3.20	-0.09	-0.06	3.04	.37	.35	1169	1038.3	40.0	-5.0
42.50	3.35	-0.09	-0.06	3.20	.34	.32	1181	1037.4	39.0	-4.3
43.00	3.50	-0.08	-0.07	3.36	.31	.30	1193	1036.5	38.0	-3.6
43.50	3.66	-0.07	-0.07	3.52	.29	.28	1203	1035.7	36.9	-3.0
44.00	3.78	-0.07	-0.07	3.65	.27	.26	1211	1034.9	35.9	-2.3
44.50	3.94	-0.06	-0.07	3.82	.24	.23	1223	1034.2	34.9	-1.7
45.00	4.00	-0.05	-0.07	3.88	.23	.22	1227	1033.4	33.8	-1.0
45.50	3.64	-0.05	-0.07	3.53	.27	.26	1204	1032.7	32.8	-0.4
46.00	3.66	-0.04	-0.07	3.55	.26	.26	1205	1032.0	31.8	0.2
46.50	3.71	-0.03	-0.07	3.61	.24	.24	1211	1031.4	30.8	0.9
47.00	3.76	-0.02	-0.07	3.67	.23	.23	1216	1030.8	29.7	1.5
47.50	3.79	-0.01	-0.07	3.71	.23	.22	1216	1030.2	28.7	2.1
48.00	3.76	-0.01	-0.07	3.69	.23	.23	1212	1029.7	27.7	2.8
48.50	3.82	0.00	-0.07	3.76	.22	.22	1216	1029.2	26.7	3.4
49.00	3.89	0.01	-0.07	3.83	.21	.21	1220	1028.8	25.7	4.0
49.50	3.90	0.02	-0.07	3.85	.20	.21	1219	1028.4	24.6	4.6
50.00	4.00	0.02	-0.07	3.95	.19	.19	1224	1028.0	23.6	5.3
50.50	4.24	0.03	-0.07	4.20	.16	.17	1237	1027.7	22.6	5.9
51.00	4.41	0.04	-0.07	4.38	.14	.15	1245	1027.5	21.6	6.5
51.50	4.68	0.05	-0.07	4.67	.11	.12	1259	1027.3	20.6	7.1
52.00	4.87	0.06	-0.07	4.86	.09	.10	1268	1027.1	19.6	7.7
52.50	5.18	0.06	-0.07	5.17	.06	.07	1281	1027.0	18.6	8.3
53.00	5.46	0.07	-0.07	5.47	.04	.05	1292	1026.9	17.5	8.9
53.50	5.40	0.08	-0.07	5.42	.04	.05	1287	1026.9	16.5	9.6
54.00	5.46	0.09	-0.07	5.49	.04	.05	1289	1027.0	15.5	10.2
54.50	5.46	0.10	-0.07	5.49	.04	.04	1289	1027.0	14.5	10.8
55.00	5.55	0.11	-0.07	5.59	.03	.04	1292	1027.2	13.5	11.4
55.50	5.61	0.12	-0.07	5.66	.03	.04	1289	1027.3	12.5	12.0
56.00	5.14	0.12	-0.07	5.20	.08	.08	1265	1027.5	11.5	12.6
56.50	4.92	0.13	-0.07	4.99	.10	.10	1253	1027.8	10.5	13.2
57.00	4.84	0.14	-0.06	4.92	.11	.11	1247	1028.1	9.5	13.8
57.50	4.13	0.15	-0.06	4.22	.18	.19	1209	1028.5	8.4	14.4
58.00	4.29	0.16	-0.06	4.39	.17	.17	1215	1028.9	7.4	15.1
58.50	4.57	0.17	-0.06	4.67	.14	.15	1227	1029.3	6.4	15.7
59.00	4.41	0.18	-0.06	4.52	.16	.16	1219	1029.8	5.4	16.3
59.50	3.69	0.18	-0.06	3.81	.24	.24	1176	1030.3	4.4	16.9
39588.50	1.97	0.33	-0.01	2.29	-17.69	-17.61	960	1073.4	300.1	53.0
89.00	2.06	0.32	-0.01	2.37	.68	.60	971	1074.2	298.7	53.6
89.50	2.16	0.31	-0.01	2.47	.67	.58	983	1075.0	297.2	54.3
90.00	2.31	0.30	0.00	2.61	.64	.56	1000	1075.7	295.7	55.0
90.50	2.44	0.29	0.00	2.73	.63	.54	1013	1076.5	294.1	55.7
91.00	2.57	0.28	0.00	2.85	.61	.52	1026	1077.2	292.5	56.4
91.50	2.60	0.27	0.00	2.87	.61	.52	1028	1077.9	290.9	57.1
92.00	2.51	0.26	0.00	2.77	.63	.54	1018	1078.6	289.1	57.8
92.50	2.45	0.25	0.00	2.70	.64	.55	1012	1079.3	287.4	58.5
93.00	2.35	0.24	0.00	2.59	.66	.57	1002	1079.9	285.5	59.2
93.50	2.25	0.22	0.00	2.47	.69	.59	989	1080.5	283.5	60.0
94.00	2.26	0.19	0.00	2.45	.69	.60	987	1081.1	281.5	60.7
94.50	2.33	0.17	0.00	2.50	.68	.59	994	1081.6	279.3	61.4
95.00	2.44	0.14	0.00	2.58	.67	.58	1003	1082.1	277.0	62.1
95.50	2.53	0.10	0.00	2.64	.66	.57	1011	1082.6	274.5	62.8
96.00	2.62	0.06	0.00	2.69	.66	.56	1017	1083.0	271.9	63.6
96.50	2.71	0.02	0.00	2.74	.65	.55	1022	1083.4	269.0	64.3
97.00	2.90	0.00	0.00	2.91	.63	.53	1039	1083.8	265.9	64.9
97.50	2.77	0.00	0.00	2.77	.65	.55	1026	1084.1	262.6	65.6

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39598.00	2.83	0.00	0.00	2.83	-17.64	-17.54	1034	1084.4	258.9	66.2
98.50	2.86	0.00	0.00	2.87	.64	.54	1039	1084.7	254.8	66.9
99.00	3.03	0.00	0.00	3.03	.62	.51	1055	1084.9	250.4	67.4
99.50	3.41	0.00	0.00	3.42	.57	.46	1089	1085.2	245.4	68.0
39600.00	3.07	0.00	0.00	3.07	.61	.51	1060	1085.3	239.9	68.4
00.50	2.81	0.00	0.00	2.82	.65	.55	1038	1085.5	233.8	68.8
01.00	2.80	0.00	0.00	2.80	.66	.55	1037	1085.6	227.1	69.2
01.50	2.84	0.00	0.00	2.85	.65	.55	1043	1085.6	219.8	69.4
02.00	3.09	0.00	0.00	3.09	.61	.51	1067	1085.7	212.1	69.5
02.50	3.55	0.00	0.00	3.55	.55	.45	1106	1085.7	203.9	69.4
03.00	3.46	0.00	0.00	3.46	.57	.46	1100	1085.7	195.7	69.3
03.50	3.39	0.00	0.00	3.39	.58	.47	1096	1085.7	187.5	69.0
04.00	3.62	0.00	0.00	3.62	.55	.44	1114	1085.6	179.7	68.5
04.50	3.37	0.00	-0.01	3.37	.58	.46	1096	1085.5	172.3	68.0
05.00	3.23	0.00	-0.01	3.23	.60	.49	1085	1085.4	165.6	67.3
05.50	3.07	0.00	-0.01	3.06	.62	.52	1072	1085.3	159.4	66.6
06.00	2.90	0.00	-0.01	2.89	.65	.55	1059	1085.2	153.8	65.7
06.50	2.75	0.00	-0.01	2.74	.67	.57	1046	1085.0	148.8	64.8
07.00	2.73	0.00	-0.01	2.72	.67	.57	1046	1084.8	144.2	63.9
07.50	2.84	0.00	-0.01	2.83	.66	.56	1058	1084.6	140.1	62.9
08.00	2.99	0.00	-0.01	2.98	.63	.54	1074	1084.4	136.4	61.9
08.50	3.10	0.00	-0.01	3.09	.62	.52	1085	1084.2	133.0	60.8
09.00	3.12	0.00	-0.01	3.11	.62	.52	1088	1083.9	129.9	59.8
09.50	3.15	0.00	-0.01	3.15	.61	.51	1093	1083.7	127.0	58.7
10.00	3.21	0.00	-0.01	3.20	.60	.50	1098	1083.4	124.3	57.6
10.50	3.20	0.00	-0.01	3.19	.60	.50	1099	1083.1	121.8	56.5
11.00	3.18	0.00	0.00	3.18	.60	.50	1100	1082.8	119.4	55.4
11.50	3.27	0.00	0.00	3.27	.59	.49	1108	1082.5	117.2	54.2
12.00	3.48	0.00	0.00	3.47	.56	.46	1124	1082.2	115.1	53.1
12.50	3.74	0.00	0.00	3.74	.53	.42	1145	1081.8	113.1	52.0
13.00	3.89	0.00	0.00	3.89	.51	.39	1158	1081.5	111.2	50.9
13.50	4.55	0.00	0.00	4.55	.43	.31	1200	1081.1	109.4	49.7
14.00	3.61	0.00	0.00	3.62	.53	.41	1144	1080.8	107.7	48.6
14.50	2.79	0.00	0.01	2.80	.65	.55	1075	1080.4	106.0	47.5
15.00	2.63	0.00	0.01	2.63	.68	.58	1060	1080.0	104.3	46.4
15.50	2.54	0.00	0.01	2.55	.69	.59	1053	1079.6	102.7	45.2
16.00	2.64	0.00	0.01	2.65	.68	.58	1066	1079.3	101.2	44.1
16.50	2.46	0.00	0.01	2.47	.70	.61	1049	1078.9	99.7	43.0
17.00	2.53	0.00	0.01	2.54	.69	.59	1058	1078.5	98.2	42.0
17.50	2.68	0.00	0.01	2.69	.66	.56	1075	1078.0	96.8	40.9
18.00	2.52	0.00	0.01	2.53	.69	.59	1061	1077.6	95.4	39.8
18.50	2.40	0.00	0.01	2.41	.71	.62	1050	1077.2	94.1	38.7
19.00	2.34	0.00	0.01	2.36	.72	.62	1046	1076.8	92.7	37.7
19.50	2.24	0.00	0.01	2.26	.73	.64	1036	1076.3	91.4	36.7
20.00	2.18	0.00	0.01	2.20	.74	.65	1031	1075.9	90.1	35.6
20.50	2.16	0.00	0.01	2.18	.74	.66	1030	1075.5	88.8	34.6
21.00	2.09	0.00	0.01	2.11	.76	.67	1021	1075.0	87.6	33.6
21.50	2.14	0.00	0.01	2.15	.75	.66	1029	1074.6	86.3	32.7
22.00	2.19	0.00	0.01	2.21	.73	.64	1038	1074.1	85.1	31.7
22.50	2.12	0.00	0.01	2.13	.75	.66	1029	1073.6	83.9	30.8
23.00	2.06	0.00	0.01	2.08	.75	.67	1025	1073.2	82.7	29.8
23.50	2.20	0.00	0.01	2.21	.72	.64	1044	1072.7	81.5	28.9
24.00	2.16	0.00	0.01	2.17	.73	.65	1041	1072.3	80.4	28.2
24.50	2.12	0.00	0.01	2.13	.74	.65	1038	1071.8	79.3	27.3
25.00	2.23	0.00	0.01	2.24	.71	.63	1054	1071.3	78.1	26.5
25.50	2.28	0.00	0.01	2.29	.70	.62	1062	1070.8	77.0	25.7
26.00	2.26	0.00	0.01	2.27	.70	.62	1063	1070.3	75.9	24.9
26.50	2.23	0.00	0.01	2.24	.70	.62	1061	1069.9	74.8	24.1
27.00	2.39	0.00	0.01	2.40	.67	.59	1082	1069.4	73.7	23.3
27.50	2.46	0.00	0.01	2.47	.65	.57	1091	1068.9	72.6	22.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39628.00	2.51	0.00	0.01	2.52	-17.64	-17.56	1099	1068.4	71.5	21.7
28.50	2.58	0.00	0.01	2.60	.62	.54	1109	1067.9	70.4	21.0
29.00	2.67	0.00	0.01	2.68	.61	.53	1119	1067.5	69.3	20.2
29.50	2.79	-0.02	0.01	2.78	.59	.50	1132	1067.0	68.2	19.5
30.00	2.88	-0.05	0.01	2.85	.57	.49	1141	1066.5	67.1	18.8
30.50	2.85	-0.06	0.02	2.81	.57	.49	1140	1066.1	66.0	18.0
31.00	2.92	-0.06	0.02	2.88	.55	.47	1150	1065.6	65.0	17.3
31.50	2.97	-0.06	0.02	2.92	.54	.46	1156	1065.1	63.9	16.6
32.00	3.11	-0.06	0.02	3.07	.51	.43	1173	1064.7	62.8	15.9
32.50	3.23	-0.06	0.02	3.19	.49	.40	1186	1064.2	61.8	15.2
33.00	3.25	-0.07	0.03	3.21	.48	.40	1190	1063.8	60.7	14.5
33.50	3.22	-0.07	0.03	3.18	.47	.38	1194	1063.4	59.6	13.8
34.00	3.64	-0.07	0.03	3.60	.40	.30	1231	1063.0	58.6	13.1
34.50	3.75	-0.07	0.03	3.71	.37	.28	1244	1062.6	57.5	12.5
35.00	4.31	-0.07	0.03	4.27	.30	.21	1277	1062.2	56.5	11.8
35.20	4.27	-0.07	0.03	4.23	.30	.20	1279	1062.0	56.0	11.5
35.40	4.14	-0.07	0.03	4.11	.32	.23	1269	1061.9	55.6	11.3
35.60	4.01	-0.07	0.04	3.98	.32	.22	1270	1061.7	55.2	11.0
35.80	6.63	-0.07	0.04	6.60	.05	-16.95	1394	1061.6	54.8	10.8
39635.90	9.38	-0.07	0.04	9.34	-16.86	-16.76	1484	1061.5	54.6	10.6
36.00	19.26	-0.07	0.04	19.23	.56	.45	1638	1061.4	54.4	10.5
36.10	18.16	-0.07	0.04	18.13	.57	.46	1632	1061.4	54.2	10.4
36.20	17.62	-0.07	0.04	17.59	.55	.45	1641	1061.3	54.0	10.2
36.30	11.58	-0.06	0.04	11.55	.72	.62	1553	1061.2	53.7	10.1
36.40	7.19	-0.06	0.04	7.17	.93	.83	1451	1061.2	53.5	10.0
36.50	6.10	-0.06	0.04	6.07	-17.03	.92	1407	1061.1	53.3	9.9
39636.60	6.23	-0.06	0.04	6.21	-17.04	-16.93	1402	1061.0	53.1	9.7
36.80	5.41	-0.06	0.04	5.39	.13	-17.03	1359	1060.9	52.7	9.5
37.00	4.45	-0.06	0.04	4.43	.23	.13	1312	1060.8	52.3	9.2
39637.50	4.49	-0.06	0.04	4.47	-17.24	-17.14	1309	1060.4	51.2	8.6
38.00	4.07	-0.06	0.04	4.05	.28	.19	1289	1060.1	50.2	8.0
39638.40	4.15	-0.05	0.04	4.14	-17.27	-17.17	1295	1059.9	49.4	7.5
38.60	4.14	-0.05	0.04	4.13	.26	.16	1301	1059.8	49.0	7.2
38.80	4.68	-0.05	0.04	4.67	.18	.09	1335	1059.7	48.5	7.0
39.00	6.86	-0.05	0.04	6.85	.01	-16.92	1414	1059.5	48.1	6.8
39.20	6.44	-0.05	0.04	6.43	.05	.95	1399	1059.4	47.7	6.5
39.40	4.78	-0.05	0.04	4.77	.17	-17.08	1340	1059.3	47.3	6.3
39639.50	4.45	-0.05	0.04	4.44	-17.21	-17.12	1323	1059.3	47.1	6.2
39.75	4.25	-0.05	0.04	4.25	.25	.15	1306	1059.2	46.6	5.9
40.00	4.06	-0.05	0.04	4.05	.29	.20	1286	1059.0	46.1	5.6
40.25	3.77	-0.05	0.04	3.77	.33	.25	1265	1058.9	45.5	5.3
40.50	3.57	-0.05	0.04	3.57	.36	.28	1252	1058.8	45.0	5.0
40.75	4.51	-0.04	0.05	4.51	.24	.15	1308	1058.7	44.5	4.7
41.00	5.01	-0.04	0.05	5.01	.17	.08	1341	1058.6	44.0	4.4
41.25	5.42	-0.04	0.05	5.43	.13	.04	1361	1058.5	43.5	4.1
41.50	4.25	-0.04	0.05	4.25	.25	.16	1303	1058.4	43.0	3.9
41.75	3.60	-0.04	0.05	3.61	.35	.27	1256	1058.3	42.5	3.6
42.00	3.04	-0.04	0.05	3.05	.43	.35	1218	1058.2	42.0	3.3
39642.50	3.23	-0.03	0.05	3.24	-17.41	-17.34	1225	1058.0	40.9	2.8
43.00	3.32	-0.03	0.05	3.34	.41	.33	1230	1057.9	39.9	2.2
43.50	3.41	-0.03	0.05	3.44	.39	.31	1240	1057.8	38.9	1.7
44.00	3.16	-0.02	0.06	3.19	.42	.34	1226	1057.6	37.9	1.2
44.50	2.88	-0.02	0.06	2.92	.46	.39	1202	1057.5	36.8	0.7
45.00	2.75	-0.02	0.06	2.79	.49	.42	1188	1057.4	35.8	0.2

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39645.50	2.61	-0.01	0.06	2.66	-17.51	-17.44	1178	1057.4	34.8	-0.3
46.00	2.34	-0.01	0.06	2.39	.55	.48	1154	1057.3	33.8	-0.7
39646.25	1.75	-0.01	0.06	1.80	-17.68	-17.60	1084	1057.3	33.3	-1.0
46.50	2.38	-0.01	0.06	2.44	.55	.48	1158	1057.3	32.8	-1.2
46.75	2.76	0.00	0.06	2.82	.48	.41	1192	1057.3	32.3	-1.4
47.00	3.39	0.00	0.07	3.45	.38	.30	1245	1057.2	31.8	-1.7
47.25	3.76	0.00	0.07	3.82	.31	.23	1278	1057.2	31.3	-1.9
47.50	3.16	0.00	0.07	3.23	.41	.34	1228	1057.2	30.7	-2.1
47.75	3.00	0.00	0.07	3.07	.46	.39	1208	1057.2	30.2	-2.4
48.00	2.66	0.00	0.07	2.73	.50	.43	1184	1057.2	29.7	-2.6
48.25	2.41	0.00	0.07	2.48	.53	.46	1167	1057.2	29.2	-2.8
48.50	2.24	0.00	0.07	2.32	.57	.50	1147	1057.2	28.7	-3.0
48.75	2.08	0.00	0.07	2.15	.62	.55	1121	1057.2	28.2	-3.3
49.00	1.82	0.01	0.07	1.90	.67	.62	1088	1057.2	27.7	-3.5
49.25	1.39	0.01	0.07	1.47	.79	.73	1018	1057.3	27.2	-3.7
49.50	1.57	0.01	0.07	1.65	.74	.68	1049	1057.3	26.7	-3.9
49.75	1.57	0.01	0.07	1.65	.74	.67	1049	1057.3	26.2	-4.1
39650.00	1.59	0.01	0.07	1.68	-17.73	-17.67	1053	1057.3	25.7	-4.3
50.50	1.67	0.02	0.08	1.77	.71	.65	1065	1057.4	24.7	-4.8
51.00	1.66	0.02	0.08	1.76	.72	.66	1062	1057.4	23.7	-5.2
51.50	1.54	0.02	0.08	1.64	.75	.69	1042	1057.5	22.6	-5.6
52.00	1.54	0.02	0.08	1.64	.75	.70	1043	1057.6	21.6	-6.1
52.50	1.36	0.03	0.08	1.46	.80	.75	1011	1057.7	20.6	-6.5
53.00	1.39	0.03	0.08	1.50	.79	.74	1017	1057.8	19.4	-7.8
53.50	1.37	0.04	0.08	1.49	.79	.74	1014	1057.9	18.4	-8.3
54.00	1.37	0.04	0.08	1.49	.79	.74	1014	1058.0	17.4	-8.8
54.50	1.44	0.04	0.08	1.56	.77	.72	1027	1058.2	16.4	-9.3
55.00	1.54	0.05	0.08	1.67	.74	.69	1046	1058.3	15.4	-9.7
55.50	1.65	0.05	0.08	1.78	.71	.66	1062	1058.4	14.4	-10.1
56.00	1.77	0.05	0.08	1.90	.69	.63	1080	1058.6	13.3	-10.5
56.50	1.85	0.05	0.08	1.99	.66	.61	1094	1058.7	12.3	-10.9
57.00	1.75	0.06	0.08	1.89	.68	.63	1083	1058.9	11.3	-11.2
39658.00	1.73	0.06	0.08	1.87	-17.69	-17.63	1080	1059.2	9.3	-11.9
59.00	1.68	0.06	0.09	1.83	.70	.64	1075	1059.6	7.4	-12.5
60.00	1.69	0.06	0.09	1.84	.70	.64	1078	1060.0	5.4	-12.9
61.00	1.71	0.06	0.09	1.86	.69	.64	1081	1060.4	3.4	-13.3
62.00	1.73	0.07	0.09	1.89	.69	.63	1086	1060.8	1.5	-13.7
63.00	1.81	0.07	0.09	1.97	.67	.61	1096	1061.2	359.6	-13.9
64.00	1.95	0.07	0.09	2.12	.64	.58	1116	1061.6	357.6	-14.1
65.00	2.01	0.08	0.09	2.18	.63	.57	1123	1062.1	355.7	-14.3
39666.00	2.19	0.08	0.09	2.36	-17.60	-17.54	1143	1062.5	353.8	-14.5
66.50	2.39	0.08	0.09	2.56	.57	.51	1162	1062.7	352.8	-14.5
67.00	2.61	0.08	0.09	2.78	.54	.47	1183	1063.0	351.8	-14.6
67.50	2.32	0.08	0.09	2.49	.59	.52	1155	1063.2	350.9	-14.7
68.00	2.25	0.08	0.09	2.42	.60	.53	1146	1063.4	349.9	-14.7
68.50	2.14	0.08	0.09	2.31	.63	.56	1133	1063.6	349.0	-14.8
69.00	2.11	0.08	0.09	2.28	.64	.57	1129	1063.9	348.0	-14.9
39670.00	2.01	0.08	0.09	2.19	-17.66	-17.59	1118	1064.3	346.1	-15.0
71.00	1.91	0.08	0.09	2.08	.68	.62	1103	1064.8	344.1	-15.2
72.00	1.87	0.08	0.09	2.04	.70	.63	1095	1065.2	342.2	-15.5
73.00	1.79	0.08	0.09	1.96	.72	.65	1082	1065.7	340.2	-15.8
74.00	1.67	0.08	0.09	1.84	.75	.69	1064	1066.1	338.3	-16.1
75.00	1.57	0.08	0.08	1.73	.78	.72	1046	1066.6	336.3	-16.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39676.00	1.61	0.08	0.08	1.77	-17.78	-17.71	1048	1067.0	334.4	-16.9
76.50	1.83	0.08	0.08	1.99	.73	.66	1077	1067.2	333.4	-17.2
77.00	1.87	0.08	0.08	2.03	.72	.65	1082	1067.4	332.4	-17.4
77.50	1.73	0.08	0.08	1.89	.75	.69	1063	1067.6	331.4	-17.7
78.00	1.88	0.08	0.08	2.04	.72	.66	1081	1067.8	330.4	-17.9
78.50	1.88	0.08	0.08	2.04	.73	.66	1079	1068.0	329.4	-18.2
79.00	1.77	0.08	0.08	1.92	.75	.69	1062	1068.2	328.4	-18.5
79.50	1.58	0.08	0.08	1.74	.79	.73	1034	1068.4	327.4	-18.8
80.00	1.47	0.08	0.08	1.62	.83	.76	1014	1068.6	326.4	-19.1
80.50	1.31	0.08	0.08	1.46	.87	.81	983	1068.8	325.4	-19.4
81.00	1.26	0.07	0.08	1.41	.89	.83	971	1068.9	324.4	-19.7
81.50	1.25	0.07	0.07	1.40	.89	.83	967	1069.1	323.4	-20.0
82.00	1.37	0.07	0.07	1.52	.86	.80	987	1069.3	322.4	-20.2
82.50	1.34	0.07	0.07	1.48	.88	.82	973	1069.4	321.5	-20.5
83.00	1.31	0.07	0.07	1.45	.89	.83	964	1069.6	320.5	-20.8
83.50	1.19	0.06	0.07	1.32	.93	.87	937	1069.7	319.5	-21.0
84.00	1.13	0.06	0.07	1.27	.95	.89	927	1069.9	318.5	-21.2
84.50	1.17	0.06	0.07	1.30	.94	.88	934	1070.0	317.5	-21.4
85.00	1.24	0.04	0.07	1.35	.93	.86	942	1070.1	316.6	-21.2
85.50	1.33	0.04	0.06	1.43	.91	.84	956	1070.3	315.6	-21.3
86.00	1.37	0.04	0.06	1.48	.89	.83	966	1070.4	314.7	-21.4
86.50	1.48	0.04	0.06	1.59	.86	.80	986	1070.5	313.7	-21.4
87.00	1.56	0.04	0.06	1.66	.85	.78	995	1070.6	312.8	-21.4
87.50	1.61	0.04	0.06	1.71	.84	.77	1003	1070.7	311.9	-21.3
88.00	1.63	0.04	0.06	1.72	.84	.78	1005	1070.8	310.9	-21.2
88.50	1.62	0.04	0.06	1.72	.84	.77	1004	1070.9	310.0	-21.0
89.00	1.66	0.04	0.06	1.76	.84	.78	1004	1070.9	309.1	-20.7
89.50	1.66	0.04	0.05	1.75	.84	.77	1004	1071.0	308.2	-20.5
90.00	1.68	0.04	0.05	1.77	.84	.77	1006	1071.1	307.3	-20.2
90.50	1.70	0.04	0.05	1.83	.83	.77	1006	1071.1	306.4	-19.8
91.00	1.75	0.04	0.05	1.83	.84	.78	1009	1071.1	305.5	-19.5
91.50	1.75	0.03	0.05	1.83	.84	.77	1014	1071.2	305.5	-19.5
92.00	1.75	0.03	0.05	1.87	.84	.77	1012	1071.2	304.6	-19.1
92.50	1.79	0.03	0.04	1.88	.84	.77	1011	1071.2	303.7	-18.7
93.00	1.81	0.03	0.04	2.01	.81	.75	1015	1071.3	302.9	-18.4
93.50	1.94	0.02	0.04	2.07	.80	.74	1015	1071.3	302.0	-18.0
94.00	2.01	0.02	0.04	2.21	.78	.71	1033	1071.3	301.1	-17.6
94.50	2.15	0.02	0.04	2.33	.76	.69	1040	1071.3	300.2	-17.3
95.00	2.28	0.02	0.04	2.23	.78	.71	1056	1071.3	299.3	-17.0
95.50	2.18	0.01	0.03	2.25	.78	.72	1069	1071.3	298.4	-16.6
96.00	2.21	0.01	0.03	2.23	.79	.72	1054	1071.3	297.5	-16.3
96.50	2.19	0.01	0.03	2.25	.79	.72	1055	1071.2	296.6	-16.0
97.00	2.21	0.00	0.03	2.22	.80	.73	1051	1071.2	295.7	-15.7
97.50	2.19	0.00	0.03	2.19	.81	.74	1045	1071.1	294.9	-15.3
98.00	2.16	0.00	0.03	2.20	.81	.75	1045	1071.1	294.0	-14.9
98.50	2.17	0.00	0.03	2.27	.80	.73	1040	1071.0	293.1	-14.4
99.00	2.24	0.00	0.03	2.31	.83	.75	1039	1071.0	292.3	-13.9
99.50	2.28	0.00	0.03	2.45	.80	.73	1046	1071.0	291.4	-13.3
39700.00	2.42	0.00	0.02	2.08	.88	.80	1034	1070.9	290.6	-12.4
00.50	2.06	0.00	0.02	2.44	.81	.75	1034	1070.9	289.6	-12.6
01.00	2.42	0.00	0.02	2.39	.82	.75	1047	1070.8	289.6	-12.6
01.50	2.37	0.00	0.02	2.01	.90	.83	999	1070.7	288.7	-12.7
02.00	1.99	0.00	0.02	1.89	.93	.86	999	1070.7	288.7	-12.7
02.50	1.87	0.00	0.02	1.88	.94	.87	1042	1070.6	287.8	-12.5
03.00	1.86	0.00	0.01	1.87	.94	.88	1035	1070.5	286.9	-12.0
03.50	1.86	0.00	0.01	1.85	.95	.89	986	1070.4	286.1	-11.1
04.00	1.83	0.00	0.01	1.84	.96	.89	969	1070.3	285.4	-9.9
04.50	1.83	0.00	0.01	1.80	.97	.91	968	1070.2	284.7	-8.3
05.00	1.79	0.00	0.01	1.82	.97	.91	968	1070.1	284.1	-6.3
05.50	1.81	0.00	0.01	1.82	.97	.91	967	1070.0	283.5	-3.9
							968	1069.9	283.0	-1.1
							965	1069.7	282.6	2.2
							973	1069.6	282.3	5.8

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39706.00	1.81	0.00	0.01	1.82	-17.97	-17.91	978	1069.5	282.1	9.8
06.50	1.77	0.00	0.01	1.78	.98	.91	977	1069.3	282.1	14.3
07.00	1.84	0.00	0.01	1.85	.96	.89	995	1069.2	282.2	19.0
07.50	1.82	0.00	0.00	1.83	.96	.89	1001	1069.0	282.5	24.1
08.00	1.81	0.00	0.00	1.81	.95	.89	1008	1068.9	283.1	29.5
08.50	1.82	0.00	0.00	1.82	.94	.87	1021	1068.7	284.1	35.1
09.00	1.81	0.00	0.00	1.81	.92	.85	1032	1068.5	285.8	40.9
09.50	1.78	0.00	0.00	1.78	.91	.84	1041	1068.4	288.7	46.8
10.00	1.77	0.00	0.00	1.77	.89	.81	1054	1068.2	293.5	52.8
10.50	1.72	0.00	0.00	1.71	.88	.80	1058	1068.0	302.7	58.5
11.00	1.71	0.00	0.00	1.71	.86	.78	1067	1067.8	322.0	63.3
11.50	1.71	0.00	0.00	1.71	.85	.77	1076	1067.6	359.3	65.5
12.00	1.69	0.00	-0.01	1.68	.84	.76	1080	1067.4	35.5	63.3
12.50	1.71	0.00	-0.01	1.70	.81	.73	1091	1067.3	53.7	58.6
13.00	1.73	0.00	-0.01	1.73	.79	.71	1102	1067.1	62.5	53.1
13.50	1.78	0.00	-0.01	1.77	.76	.68	1114	1066.9	67.2	47.4
14.00	1.90	0.00	-0.01	1.89	.72	.64	1135	1066.7	69.9	41.7
14.50	1.75	0.00	-0.01	1.74	.75	.67	1112	1066.4	71.5	36.2
15.00	1.61	0.00	-0.01	1.60	.79	.71	1090	1066.2	72.6	30.8
15.50	1.60	0.00	-0.01	1.59	.78	.70	1089	1066.0	73.2	25.6
16.00	1.64	0.00	-0.01	1.62	.76	.68	1095	1065.8	73.5	20.7
16.50	1.68	0.00	-0.02	1.66	.73	.66	1102	1065.6	73.6	16.2
17.00	1.72	0.00	-0.02	1.70	.72	.64	1106	1065.4	73.5	12.0
17.50	1.72	0.00	-0.02	1.70	.71	.64	1103	1065.2	73.4	8.2
18.00	1.67	0.00	-0.02	1.66	.72	.65	1094	1064.9	73.1	4.7
18.50	1.70	0.00	-0.02	1.68	.70	.64	1095	1064.7	72.7	1.7
19.00	1.77	0.00	-0.02	1.75	.68	.61	1104	1064.5	72.2	-0.9
19.50	2.00	0.00	-0.02	1.98	.62	.54	1137	1064.2	71.7	-3.1
20.00	2.12	0.00	-0.02	2.10	.59	.51	1152	1064.0	71.1	-4.9
20.50	2.26	0.00	-0.02	2.24	.55	.48	1169	1063.8	70.4	-6.2
21.00	2.43	0.00	-0.02	2.41	.51	.44	1188	1063.5	69.7	-7.1
21.50	2.34	0.00	-0.03	2.32	.53	.45	1179	1063.3	68.9	-7.7
22.00	2.30	0.00	-0.03	2.27	.53	.46	1174	1063.1	68.1	-7.9
22.50	2.30	0.00	-0.03	2.27	.52	.45	1177	1062.8	67.2	-7.8
23.00	2.33	0.00	-0.03	2.30	.51	.44	1182	1062.6	66.3	-7.3
23.50	2.31	0.00	-0.03	2.28	.52	.44	1179	1062.3	65.3	-6.7
24.00	2.32	0.01	-0.03	2.29	.52	.44	1180	1062.1	64.3	-5.9
24.50	2.36	0.01	-0.04	2.33	.51	.43	1185	1061.8	63.3	-4.9
25.00	2.39	0.00	-0.04	2.36	.50	.42	1189	1061.6	62.3	-3.9
25.50	2.50	0.00	-0.04	2.47	.45	.37	1213	1061.3	61.8	-6.6
26.00	2.49	0.00	-0.04	2.45	.45	.37	1211	1061.1	61.0	-7.0
26.50	2.52	0.00	-0.04	2.48	.43	.36	1215	1060.8	60.2	-7.4
27.00	2.55	0.00	-0.04	2.51	.43	.35	1217	1060.6	59.4	-7.8
27.50	2.68	0.00	-0.04	2.64	.40	.33	1228	1060.3	58.6	-8.2
28.00	2.81	0.00	-0.05	2.76	.38	.31	1238	1060.1	57.8	-8.5
28.50	2.81	0.00	-0.05	2.76	.38	.31	1236	1059.8	57.0	-8.9
29.00	2.76	0.00	-0.05	2.71	.39	.32	1231	1059.6	56.2	-9.2
29.50	2.77	0.00	-0.05	2.72	.38	.31	1231	1059.3	55.4	-9.5
30.00	2.76	-0.01	-0.05	2.70	.39	.32	1228	1059.1	54.6	-9.8
30.50	2.82	-0.01	-0.05	2.76	.38	.31	1232	1058.8	53.7	-10.1
31.00	2.86	-0.01	-0.06	2.79	.37	.30	1233	1058.6	52.9	-10.4
31.50	2.93	-0.01	-0.06	2.86	.36	.29	1238	1058.3	52.1	-10.6
32.00	3.11	-0.01	-0.06	3.04	.33	.26	1252	1058.1	51.3	-10.8
32.50	3.15	-0.01	-0.06	3.07	.32	.25	1254	1057.8	50.4	-11.1
33.00	3.27	-0.02	-0.06	3.19	.30	.23	1263	1057.6	49.6	-11.3
33.50	3.63	-0.02	-0.06	3.55	.25	.18	1287	1057.3	48.8	-11.5
34.00	3.68	-0.02	-0.06	3.60	.25	.18	1287	1057.1	48.0	-11.7
34.50	3.81	-0.02	-0.06	3.73	.23	.16	1296	1056.8	47.1	-11.9
35.00	3.71	-0.02	-0.06	3.62	.23	.17	1290	1056.6	46.3	-12.0
35.50	3.64	-0.02	-0.06	3.55	.24	.17	1283	1056.3	45.5	-12.2

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39736.00	3.22	-0.03	-0.07	3.13	-17.31	-17.24	1248	1056.1	44.6	-12.3
36.50	2.93	-0.03	-0.07	2.83	.35	.29	1220	1055.8	43.8	-12.4
37.00	2.76	-0.03	-0.07	2.67	.38	.32	1204	1055.6	43.0	-12.5
37.50	2.60	-0.03	-0.07	2.50	.41	.35	1185	1055.4	42.1	-12.6
38.00	2.55	-0.03	-0.07	2.45	.42	.36	1176	1055.1	41.3	-12.7
38.50	2.56	-0.03	-0.07	2.45	.42	.37	1173	1054.9	40.4	-12.8
39.00	2.53	-0.04	-0.07	2.42	.43	.37	1168	1054.6	39.6	-12.9
39.50	2.58	-0.04	-0.07	2.47	.42	.37	1171	1054.4	38.7	-12.9
40.00	2.64	-0.04	-0.07	2.52	.41	.36	1174	1054.2	37.9	-13.0
40.50	2.65	-0.04	-0.07	2.53	.41	.36	1173	1053.9	37.0	-13.0
41.00	2.60	-0.04	-0.08	2.48	.42	.37	1166	1053.7	36.2	-13.0
41.50	2.55	-0.04	-0.08	2.43	.43	.38	1158	1053.5	35.3	-13.1
42.00	2.52	-0.04	-0.08	2.40	.43	.38	1154	1053.2	34.5	-13.1
42.50	2.52	-0.04	-0.08	2.40	.43	.38	1153	1053.0	33.6	-13.0
43.00	2.50	-0.05	-0.08	2.38	.43	.38	1149	1052.8	32.8	-13.0
43.50	2.51	-0.05	-0.08	2.38	.44	.39	1146	1052.6	31.9	-13.0
44.00	2.56	-0.05	-0.08	2.43	.43	.38	1150	1052.3	31.1	-12.9
44.50	2.55	-0.05	-0.08	2.42	.43	.38	1147	1052.1	30.2	-12.9
45.00	2.62	-0.05	-0.09	2.48	.42	.37	1152	1051.9	29.3	-12.8
45.50	2.79	-0.05	-0.09	2.66	.39	.34	1167	1051.7	28.5	-12.8
46.00	2.84	-0.05	-0.09	2.71	.38	.33	1170	1051.5	27.6	-12.7
46.50	2.98	-0.05	-0.09	2.85	.35	.30	1184	1051.3	26.8	-12.6
47.00	3.09	-0.05	-0.09	2.95	.34	.28	1191	1051.1	25.9	-12.5
47.50	3.14	-0.05	-0.09	3.00	.33	.28	1191	1050.9	25.0	-12.4
48.00	3.20	-0.05	-0.09	3.06	.32	.28	1194	1050.7	24.1	-12.2
48.50	3.27	-0.05	-0.09	3.12	.32	.27	1193	1050.5	23.3	-12.1
49.00	3.33	-0.05	-0.09	3.18	.31	.26	1199	1050.3	22.4	-12.0
49.50	3.40	-0.05	-0.09	3.26	.30	.25	1203	1050.1	21.5	-11.8
50.00	3.47	-0.05	-0.09	3.33	.29	.25	1205	1049.9	20.7	-11.7
50.50	3.54	-0.05	-0.09	3.39	.29	.24	1207	1049.8	19.6	-11.5
51.00	3.60	-0.05	-0.10	3.45	.28	.24	1208	1049.6	18.9	-11.3
51.50	3.64	-0.05	-0.10	3.49	.28	.23	1209	1049.4	18.0	-11.1
52.00	3.67	-0.05	-0.10	3.53	.27	.23	1211	1049.3	17.1	-10.9
52.50	3.71	-0.05	-0.10	3.56	.27	.22	1211	1049.1	16.3	-10.7
53.00	3.74	-0.05	-0.09	3.60	.26	.22	1212	1048.9	15.4	-10.5
53.50	3.78	-0.05	-0.09	3.64	.25	.21	1215	1048.8	14.5	-10.3
54.00	3.83	-0.04	-0.09	3.69	.24	.19	1219	1048.6	13.6	-10.1
54.50	3.83	-0.04	-0.09	3.69	.24	.19	1219	1048.5	12.7	-9.8
55.00	3.79	-0.04	-0.09	3.65	.25	.20	1212	1048.4	11.8	-9.6
55.50	3.76	-0.04	-0.09	3.63	.27	.22	1202	1048.2	10.9	-9.3
56.00	3.75	-0.04	-0.09	3.61	.27	.23	1197	1048.1	10.0	-9.1
56.50	3.73	-0.04	-0.09	3.60	.28	.24	1194	1048.0	9.1	-8.8
57.00	3.73	-0.04	-0.09	3.60	.28	.24	1191	1047.9	8.3	-8.5
57.50	3.73	-0.04	-0.09	3.60	.28	.24	1188	1047.7	7.4	-8.3
58.00	3.72	-0.04	-0.09	3.59	.28	.24	1185	1047.6	6.5	-8.0
58.50	3.71	-0.04	-0.09	3.58	.29	.25	1183	1047.5	5.6	-7.7
59.00	3.69	-0.03	-0.09	3.57	.29	.25	1180	1047.4	4.7	-7.4
59.50	3.67	-0.03	-0.09	3.55	.29	.25	1176	1047.4	3.8	-7.1
60.00	3.65	-0.03	-0.09	3.53	.30	.26	1172	1047.3	2.9	-6.8
60.50	3.63	-0.03	-0.09	3.51	.30	.26	1168	1047.2	2.0	-6.5
61.00	3.65	-0.03	-0.09	3.54	.30	.26	1168	1047.1	1.1	-6.1
61.50	3.67	-0.02	-0.09	3.55	.30	.25	1168	1047.0	0.1	-5.8
62.00	3.63	-0.02	-0.09	3.52	.29	.25	1167	1047.0	359.2	-5.5
62.50	3.60	-0.02	-0.09	3.49	.30	.26	1161	1046.9	358.3	-5.1
63.00	3.57	-0.02	-0.09	3.46	.31	.27	1156	1046.9	357.4	-4.8
63.50	3.50	-0.02	-0.09	3.39	.32	.28	1147	1046.8	356.5	-4.5
64.00	3.45	-0.02	-0.09	3.34	.34	.29	1138	1046.8	355.6	-4.1
64.50	3.39	-0.02	-0.09	3.28	.35	.31	1128	1046.8	354.7	-3.8
65.00	3.34	-0.01	-0.09	3.24	.36	.32	1122	1046.7	353.8	-3.4
65.50	3.31	-0.01	-0.09	3.21	.36	.33	1117	1046.7	352.9	-3.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39766.00	3.28	-0.01	-0.09	3.19	-17.37	-17.33	1113	1046.7	352.0	-2.7
66.50	3.26	-0.01	-0.09	3.16	.38	.34	1107	1046.7	351.0	-2.3
67.00	3.24	-0.01	-0.09	3.14	.38	.35	1102	1046.7	350.1	-2.0
67.50	3.22	-0.01	-0.09	3.13	.39	.35	1097	1046.7	349.2	-1.6
68.00	3.20	0.00	-0.08	3.12	.39	.36	1093	1046.7	348.3	-1.2
68.50	3.19	0.00	-0.08	3.11	.40	.36	1089	1046.7	347.4	-0.9
69.00	3.19	0.00	-0.08	3.11	.40	.37	1085	1046.7	346.5	-0.5
69.50	3.18	0.00	-0.08	3.10	.41	.37	1081	1046.7	345.6	-0.2
70.00	3.19	0.00	-0.08	3.11	.41	.37	1079	1046.7	344.6	0.2
70.50	3.21	0.00	-0.08	3.14	.41	.37	1078	1046.7	343.7	0.6
71.00	3.23	0.01	-0.08	3.16	.41	.37	1077	1046.8	342.8	0.9
71.50	3.24	0.01	-0.08	3.18	.41	.37	1075	1046.8	341.9	1.3
72.00	3.26	0.01	-0.07	3.20	.41	.37	1073	1046.9	341.0	1.6
72.50	3.30	0.01	-0.07	3.24	.41	.37	1073	1046.9	340.1	2.0
39773.00	3.27	0.02	-0.07	3.22	-17.41	-17.38	1068	1046.9	339.1	2.5
73.50	3.58	0.02	-0.07	3.53	.37	.34	1091	1047.0	338.2	2.9
74.00	3.96	0.03	-0.07	3.92	.33	.30	1115	1047.0	337.3	3.3
74.50	3.69	0.03	-0.07	3.66	.37	.33	1094	1047.1	336.4	3.7
75.00	3.67	0.03	-0.07	3.63	.37	.34	1090	1047.2	335.4	4.0
75.50	3.62	0.03	-0.06	3.59	.38	.34	1084	1047.2	334.5	4.3
76.00	3.58	0.03	-0.06	3.55	.39	.35	1079	1047.3	333.6	4.7
76.50	3.52	0.03	-0.06	3.49	.40	.36	1071	1047.4	332.7	5.0
77.00	3.50	0.04	-0.06	3.48	.41	.37	1067	1047.4	331.8	5.4
77.50	3.49	0.04	-0.06	3.47	.41	.37	1062	1047.5	330.8	5.7
78.00	3.44	0.04	-0.06	3.42	.42	.38	1055	1047.6	329.9	6.0
78.50	3.45	0.04	-0.06	3.44	.42	.39	1053	1047.7	329.0	6.4
79.00	3.42	0.04	-0.05	3.41	.43	.40	1048	1047.8	328.1	6.7
79.50	3.40	0.05	-0.05	3.39	.44	.40	1043	1047.8	327.1	7.1
80.00	3.44	0.05	-0.05	3.43	.44	.40	1043	1047.9	326.2	7.5
80.50	3.48	0.05	-0.05	3.48	.43	.40	1043	1048.0	325.3	7.9
81.00	3.44	0.05	-0.05	3.44	.44	.41	1036	1048.1	324.4	8.3
81.50	3.20	0.05	-0.05	3.20	.48	.44	1013	1048.2	323.4	8.7
82.00	3.14	0.05	-0.04	3.14	.49	.46	1005	1048.3	322.5	9.1
82.50	3.14	0.05	-0.04	3.15	.49	.46	1003	1048.4	321.5	9.5
83.00	3.14	0.05	-0.04	3.16	.49	.46	1001	1048.4	320.6	9.9
83.50	3.08	0.06	-0.04	3.10	.51	.47	993	1048.5	319.7	10.4
84.00	2.96	0.06	-0.04	2.98	.53	.49	979	1048.6	318.7	10.8
84.50	2.90	0.06	-0.04	2.93	.54	.50	972	1048.7	317.8	11.3
85.00	2.95	0.06	-0.03	2.98	.53	.50	974	1048.8	316.8	11.8
85.50	3.22	0.06	-0.03	3.25	.50	.46	994	1048.9	315.9	12.3
86.00	3.40	0.06	-0.03	3.43	.48	.44	1005	1049.0	314.9	12.8
86.50	3.60	0.07	-0.03	3.63	.46	.42	1018	1049.0	313.9	13.3
87.00	3.62	0.07	-0.03	3.66	.46	.42	1018	1049.1	313.0	13.9
87.50	3.63	0.07	-0.03	3.67	.46	.42	1016	1049.2	312.0	14.4
88.00	3.67	0.07	-0.03	3.72	.46	.42	1017	1049.3	311.1	15.0
88.50	3.68	0.07	-0.02	3.72	.46	.43	1014	1049.3	310.1	15.5
89.00	3.61	0.07	-0.02	3.66	.47	.44	1006	1049.4	309.1	16.1
89.50	3.59	0.07	-0.02	3.64	.48	.44	1002	1049.5	308.1	16.7
90.00	3.79	0.07	-0.02	3.84	.46	.42	1013	1049.5	307.2	17.3
90.50	3.98	0.07	-0.02	4.03	.44	.40	1023	1049.6	306.2	18.0
91.00	4.50	0.07	-0.02	4.55	.39	.35	1054	1049.6	305.2	18.6
91.50	5.16	0.07	-0.02	5.22	.33	.29	1089	1049.7	304.2	19.2
92.00	5.57	0.07	-0.01	5.62	.30	.26	1106	1049.7	303.2	19.9
92.50	5.36	0.07	-0.01	5.41	.32	.28	1093	1049.8	302.2	20.6
93.00	4.76	0.06	-0.01	4.81	.38	.34	1057	1049.8	301.2	21.2
93.50	4.59	0.06	-0.01	4.65	.40	.36	1045	1049.8	300.2	21.9
94.00	4.07	0.06	-0.01	4.13	.45	.41	1009	1049.9	299.2	22.7
94.50	4.05	0.06	-0.01	4.11	.46	.42	1005	1049.9	298.2	23.4
95.00	4.05	0.06	0.00	4.10	.46	.42	1001	1049.9	297.2	24.1

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39795.50	4.05	0.06	0.00	4.10	-17.46	-17.43	999	1049.9	296.2	24.9
96.00	4.04	0.05	0.00	4.09	.46	.43	995	1049.9	295.2	25.6
96.50	3.96	0.05	0.00	4.01	.47	.44	987	1049.9	294.2	26.4
97.00	3.90	0.04	0.00	3.95	.48	.45	980	1049.9	293.1	27.2
97.50	3.82	0.04	0.00	3.86	.49	.46	970	1049.9	292.1	28.1
98.00	4.12	0.04	0.00	4.16	.46	.43	988	1049.8	291.1	28.9
98.50	3.66	0.04	0.00	3.70	.52	.48	952	1049.8	290.0	29.8
99.00	3.52	0.03	0.01	3.55	.53	.50	939	1049.8	289.0	30.7
99.50	3.31	0.03	0.01	3.34	.56	.53	920	1049.7	287.9	31.6
39800.00	3.14	0.02	0.01	3.16	.59	.55	902	1049.7	286.9	32.5
00.50	2.98	0.01	0.01	3.00	.61	.57	886	1049.6	285.8	33.5
01.00	2.89	0.00	0.01	2.90	.63	.59	875	1049.5	284.7	34.5
01.50	2.81	0.00	0.01	2.82	.64	.60	865	1049.5	283.7	35.5
02.00	2.83	0.00	0.01	2.84	.63	.60	865	1049.4	282.6	36.6
02.50	3.05	0.00	0.01	3.06	.60	.56	883	1049.3	281.5	37.7
03.00	3.11	0.00	0.01	3.12	.59	.55	885	1049.2	280.4	38.9
03.50	3.04	0.00	0.01	3.05	.60	.56	877	1049.1	279.2	40.1
04.00	2.89	0.00	0.01	2.90	.62	.59	862	1049.0	278.1	41.3
04.50	2.80	0.00	0.01	2.81	.63	.60	852	1048.8	277.0	42.6
05.00	2.73	0.00	0.01	2.74	.64	.61	844	1048.7	275.8	44.0
05.50	2.61	0.00	0.01	2.62	.66	.63	831	1048.5	274.6	45.4
06.00	3.04	0.00	0.01	3.05	.59	.55	868	1048.4	273.4	46.9
06.50	3.10	0.00	0.01	3.11	.57	.54	870	1048.2	272.2	48.4
07.00	2.98	0.00	0.01	2.99	.59	.56	858	1048.0	271.0	50.0
07.50	2.92	0.00	0.01	2.93	.59	.56	851	1047.9	269.7	51.7
08.00	2.96	0.00	0.01	2.97	.58	.55	854	1047.7	268.4	53.4
08.50	2.91	0.00	0.01	2.92	.59	.56	851	1047.5	267.8	52.0
09.00	2.90	0.00	0.01	2.91	.59	.56	851	1047.2	266.3	54.4
09.50	2.97	0.00	0.01	2.98	.57	.54	856	1047.0	264.8	57.0
10.00	3.07	0.00	0.01	3.08	.54	.51	863	1046.8	263.2	59.6
10.50	3.20	0.00	0.01	3.21	.52	.49	873	1046.5	261.5	62.3
11.00	3.39	0.00	0.01	3.40	.48	.45	889	1046.3	259.8	65.1
11.50	3.51	0.00	0.01	3.52	.46	.43	898	1046.0	258.0	67.8
12.00	3.57	0.00	0.01	3.58	.44	.41	903	1045.7	256.1	70.5
12.50	3.63	0.00	0.01	3.64	.42	.39	909	1045.5	254.0	73.2
13.00	3.70	0.00	0.01	3.71	.40	.37	915	1045.2	251.9	75.9
13.50	3.80	0.00	0.01	3.81	.37	.35	924	1044.9	249.6	78.5
14.00	3.88	0.00	0.01	3.89	.35	.33	932	1044.5	247.1	81.0
14.50	3.90	0.00	0.01	3.91	.34	.32	935	1044.2	244.5	83.4
15.00	3.95	0.00	0.01	3.96	.33	.30	940	1043.9	241.6	85.7
15.50	4.00	0.00	0.01	4.01	.31	.29	946	1043.5	238.4	88.0
16.00	4.05	0.00	0.01	4.06	.30	.28	951	1043.2	234.8	90.1
16.50	4.42	0.00	0.01	4.44	.26	.23	976	1042.8	230.8	92.1
17.00	4.49	0.01	0.01	4.50	.24	.22	984	1042.4	226.2	94.0
17.50	4.50	0.01	0.01	4.52	.23	.21	990	1042.1	220.9	95.8
18.00	4.51	0.01	0.01	4.53	.22	.20	991	1041.7	214.7	97.5
18.50	4.69	0.00	0.01	4.70	.20	.18	1003	1041.3	207.1	99.0
19.00	4.39	0.00	0.01	4.40	.22	.20	987	1040.9	198.1	100.3
19.50	4.31	-0.01	0.01	4.31	.22	.21	986	1040.4	187.3	101.3
20.00	4.24	-0.01	0.01	4.24	.22	.21	985	1040.0	174.7	102.0
20.50	4.19	-0.01	0.01	4.19	.22	.21	985	1039.6	161.0	102.4
21.00	4.17	-0.02	0.01	4.15	.22	.21	987	1039.1	147.3	102.3
21.50	4.16	-0.03	0.01	4.14	.22	.20	988	1038.6	134.7	101.8
22.00	4.11	-0.03	0.01	4.08	.22	.21	986	1038.2	123.7	100.9
22.50	4.05	-0.04	0.01	4.02	.23	.21	984	1037.7	114.6	99.8
23.00	3.98	-0.04	0.01	3.94	.23	.22	981	1037.2	107.1	98.6
23.50	3.79	-0.05	0.01	3.75	.25	.24	969	1036.7	100.9	97.2
24.00	3.78	-0.06	0.01	3.73	.25	.23	976	1036.2	95.7	95.7
24.50	3.80	-0.07	0.01	3.74	.24	.23	985	1035.7	91.3	94.1
25.00	3.79	-0.07	0.01	3.72	.24	.23	984	1035.2	87.5	92.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39825.50	4.28	-0.08	0.01	4.21	-17.19	-17.18	1023	1034.7	84.1	90.9
26.00	4.30	-0.09	0.01	4.22	.19	.18	1025	1034.2	81.2	89.3
26.50	3.75	-0.10	0.01	3.67	.24	.23	993	1033.6	78.5	87.8
27.00	3.41	-0.11	0.01	3.31	.27	.27	977	1033.1	76.1	86.2
27.50	3.21	-0.11	0.01	3.11	.29	.29	964	1032.5	73.8	84.6
28.00	3.29	-0.13	0.01	3.17	.29	.28	973	1032.0	71.7	83.1
28.50	3.29	-0.13	0.01	3.17	.28	.28	980	1031.4	69.8	81.7
29.00	3.31	-0.14	0.01	3.18	.28	.28	988	1030.9	68.0	80.3
29.50	3.33	-0.15	0.01	3.19	.28	.28	993	1030.3	66.2	78.9
30.00	3.80	-0.15	0.02	3.67	.22	.22	1036	1029.7	64.6	77.6
30.50	4.07	-0.16	0.02	3.93	.20	.20	1058	1029.2	63.0	76.3
31.00	3.93	-0.17	0.02	3.78	.21	.22	1049	1028.6	61.5	75.1
31.50	3.62	-0.17	0.02	3.47	.25	.26	1026	1028.0	60.0	74.0
32.00	3.63	-0.18	0.02	3.46	.25	.26	1030	1027.4	58.6	72.9
32.50	3.74	-0.18	0.02	3.58	.24	.24	1044	1026.8	57.2	71.9
33.00	4.41	-0.19	0.02	4.24	.16	.17	1100	1026.2	55.9	70.9
33.50	3.78	-0.20	0.02	3.61	.23	.24	1057	1025.6	54.6	70.0
34.00	3.30	-0.20	0.02	3.11	.29	.30	1017	1025.0	53.3	69.1
34.50	3.34	-0.21	0.02	3.15	.28	.29	1025	1024.4	52.1	68.3
35.00	3.39	-0.21	0.02	3.19	.28	.29	1035	1023.9	50.8	67.6
35.50	3.38	-0.22	0.02	3.18	.27	.29	1040	1023.3	49.6	66.8
36.00	3.47	-0.22	0.02	3.26	.26	.28	1050	1022.7	48.4	66.2
36.50	3.61	-0.23	0.02	3.40	.25	.26	1063	1022.1	47.2	65.5
37.00	3.67	-0.23	0.02	3.46	.24	.26	1069	1021.5	46.1	64.9
37.50	3.94	-0.24	0.02	3.72	.21	.23	1094	1020.9	44.9	64.3
38.00	4.18	-0.24	0.02	3.95	.18	.20	1115	1020.3	43.8	63.7
38.50	4.51	-0.24	0.02	4.29	.15	.17	1141	1019.7	42.6	63.1
39.00	4.71	-0.24	0.02	4.48	.13	.15	1154	1019.1	41.5	62.5
39.50	5.06	-0.25	0.02	4.84	.10	.12	1177	1018.5	40.3	61.9
40.00	5.58	-0.25	0.02	5.35	.06	.09	1206	1018.0	39.2	61.3
40.50	6.03	-0.25	0.02	5.80	.03	.05	1229	1017.4	38.0	60.7
41.00	6.51	-0.26	0.02	6.28	-16.99	.02	1252	1016.8	36.9	60.1
41.50	6.77	-0.26	0.02	6.54	.98	.01	1264	1016.3	35.7	59.4
42.00	7.00	-0.26	0.02	6.76	.96	-16.99	1274	1015.7	34.6	58.6
42.50	7.26	-0.26	0.02	7.02	.94	.98	1286	1015.1	33.4	57.9
43.00	8.10	-0.27	0.03	7.86	.89	.93	1317	1014.6	32.2	57.0
43.50	8.52	-0.27	0.03	8.28	.87	.91	1332	1014.1	31.0	56.0
44.00	8.64	-0.27	0.03	8.40	.86	.91	1339	1013.5	29.8	55.0
44.50	8.40	-0.27	0.03	8.16	.87	.92	1335	1013.0	28.6	53.9
45.00	7.32	-0.27	0.03	7.08	.94	.99	1311	1012.5	26.3	47.1
45.50	6.95	-0.27	0.03	6.71	.97	-17.02	1298	1012.0	25.2	46.5
46.00	6.79	-0.27	0.03	6.56	.98	.03	1293	1011.5	24.1	45.9
46.50	6.63	-0.27	0.03	6.39	.99	.04	1287	1011.0	23.0	45.4
47.00	6.49	-0.27	0.03	6.26	-17.00	.06	1283	1010.5	21.9	44.9
47.50	6.37	-0.27	0.03	6.14	.01	.07	1278	1010.0	20.9	44.4
48.00	5.87	-0.27	0.03	5.64	.06	.11	1255	1009.6	19.8	44.0
48.50	5.55	-0.27	0.03	5.32	.09	.14	1239	1009.1	18.7	43.6
49.00	4.90	-0.27	0.03	4.67	.15	.20	1206	1008.7	17.7	43.3
49.50	4.82	-0.27	0.03	4.59	.16	.21	1200	1008.3	16.6	42.9
50.00	4.88	-0.27	0.03	4.65	.16	.21	1203	1007.9	15.6	42.6
50.50	4.88	-0.26	0.03	4.65	.16	.21	1204	1007.5	14.5	42.2
51.00	4.92	-0.26	0.03	4.69	.16	.21	1207	1007.1	13.5	41.9
51.50	5.26	-0.26	0.03	5.03	.13	.18	1225	1006.8	12.5	41.6
52.00	5.11	-0.26	0.04	4.88	.14	.20	1218	1006.4	11.4	41.2
52.50	5.10	-0.26	0.04	4.87	.14	.20	1217	1006.1	10.4	40.9
53.00	5.01	-0.26	0.04	4.78	.15	.21	1215	1005.7	9.3	40.5
53.50	4.82	-0.26	0.04	4.59	.17	.23	1206	1005.4	8.3	40.2
54.00	4.87	-0.26	0.04	4.64	.17	.23	1207	1005.2	7.2	39.8
54.50	5.27	-0.26	0.04	5.04	.13	.20	1227	1004.9	6.2	39.4
55.00	5.95	-0.26	0.04	5.72	.08	.15	1257	1004.6	5.1	39.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39855.40	6.58	-0.26	0.04	6.36	-17.03	-17.10	1282	1004.4	4.3	38.7
55.60	7.00	-0.26	0.04	6.78	.00	.07	1299	1004.3	3.8	38.5
55.80	7.42	-0.26	0.04	7.20	-16.98	.05	1312	1004.2	3.4	38.3
56.00	10.00	-0.26	0.04	9.78	.84	-16.92	1379	1004.2	3.0	38.1
56.20	9.75	-0.26	0.04	9.53	.86	.93	1371	1004.1	2.6	38.0
56.40	5.59	-0.26	0.04	5.37	-17.11	-17.18	1242	1004.0	2.2	37.8
56.60	4.67	-0.26	0.04	4.45	.20	.27	1197	1003.9	1.7	37.6
56.80	4.15	-0.25	0.04	3.93	.26	.32	1166	1003.8	1.3	37.4
57.00	4.44	-0.25	0.04	4.22	.23	.30	1182	1003.8	0.9	37.2
39857.50	6.09	-0.25	0.04	5.88	-17.08	-17.15	1262	1003.6	359.8	36.7
58.00	5.97	-0.25	0.04	5.77	.09	.16	1260	1003.4	358.7	36.2
58.50	4.97	-0.25	0.04	4.77	.18	.25	1212	1003.3	357.7	35.7
59.00	4.94	-0.24	0.04	4.74	.19	.26	1208	1003.2	356.6	35.1
59.50	5.27	-0.24	0.04	5.07	.16	.23	1224	1003.1	355.5	34.5
60.00	5.37	-0.24	0.04	5.17	.15	.22	1230	1003.0	354.5	33.9
60.50	5.72	-0.23	0.04	5.53	.12	.20	1246	1002.9	353.4	33.3
61.00	6.05	-0.23	0.04	5.86	.10	.17	1260	1002.9	352.3	32.7
61.50	6.72	-0.22	0.04	6.54	.05	.13	1285	1002.8	351.2	32.1
62.00	6.81	-0.22	0.04	6.64	.05	.12	1289	1002.8	350.2	31.4
62.50	6.38	-0.21	0.04	6.21	.08	.16	1274	1002.8	349.1	30.8
63.00	6.20	-0.21	0.04	6.03	.10	.17	1267	1002.8	348.0	30.1
63.50	6.08	-0.20	0.04	5.92	.11	.18	1264	1002.8	346.9	29.4
64.00	6.13	-0.20	0.04	5.98	.11	.18	1265	1002.9	345.8	28.7
64.50	6.20	-0.19	0.04	6.05	.11	.18	1266	1002.9	344.7	28.0
65.00	6.31	-0.19	0.04	6.16	.10	.18	1270	1003.0	343.7	27.3
65.50	6.43	-0.18	0.04	6.29	.10	.17	1274	1003.1	342.6	26.5
66.00	6.60	-0.17	0.04	6.47	.09	.17	1277	1003.2	341.5	25.8
66.50	6.82	-0.17	0.04	6.69	.08	.16	1282	1003.3	340.4	25.1
67.00	7.37	-0.16	0.04	7.25	.05	.13	1299	1003.5	339.3	24.3
67.50	7.61	-0.16	0.04	7.49	.04	.12	1305	1003.6	338.2	23.6
68.00	7.95	-0.15	0.04	7.84	.03	.10	1313	1003.8	337.2	22.9
68.50	7.44	-0.14	0.04	7.34	.06	.14	1296	1004.0	336.1	22.1
69.00	6.93	-0.14	0.04	6.83	.10	.17	1278	1004.2	335.0	21.4
69.50	6.61	-0.13	0.04	6.52	.13	.20	1266	1004.3	333.9	20.6
70.00	6.33	-0.13	0.04	6.24	.16	.23	1255	1004.6	332.9	19.9
70.50	5.98	-0.12	0.04	5.90	.19	.26	1241	1004.8	331.8	19.2
71.00	5.68	-0.12	0.04	5.60	.22	.29	1227	1005.0	330.7	18.4
71.50	5.73	-0.11	0.04	5.66	.22	.29	1226	1005.2	329.6	17.7
72.00	6.03	-0.10	0.04	5.96	.21	.27	1234	1005.5	328.6	17.0
72.50	4.98	-0.10	0.04	4.92	.30	.36	1191	1005.7	327.5	16.2
73.00	4.78	-0.09	0.04	4.73	.33	.39	1179	1006.0	326.4	15.5
73.50	4.82	-0.08	0.04	4.77	.33	.39	1178	1006.3	325.3	14.8
74.00	4.57	-0.08	0.04	4.53	.37	.42	1162	1006.6	324.3	14.0
74.50	4.11	-0.07	0.04	4.07	.42	.47	1136	1006.8	323.2	13.3
75.00	4.25	-0.06	0.04	4.23	.40	.46	1145	1007.1	322.1	12.6
75.50	4.08	-0.06	0.04	4.06	.43	.48	1133	1007.4	321.1	11.8
76.00	3.88	-0.05	0.04	3.86	.46	.51	1117	1007.7	320.0	11.1
76.50	3.65	-0.05	0.04	3.64	.49	.54	1101	1008.0	318.9	10.3
77.00	3.56	-0.04	0.04	3.55	.51	.56	1093	1008.3	317.9	9.5
77.50	3.68	-0.04	0.03	3.68	.50	.55	1101	1008.6	316.7	8.2
78.00	3.77	-0.03	0.03	3.77	.50	.54	1106	1008.9	315.6	7.4
78.50	3.69	-0.02	0.03	3.70	.51	.55	1099	1009.2	314.6	6.6
79.00	3.62	-0.02	0.03	3.63	.52	.56	1094	1009.5	313.5	5.8
79.50	3.59	-0.01	0.03	3.61	.53	.57	1091	1009.8	312.4	4.9
80.00	3.72	0.00	0.03	3.74	.52	.56	1098	1010.1	311.3	4.1
80.50	4.02	0.00	0.03	4.05	.49	.53	1115	1010.4	310.2	3.2
81.00	4.44	0.01	0.02	4.47	.45	.49	1136	1010.7	309.2	2.4
81.50	4.95	0.02	0.02	4.99	.40	.44	1161	1011.0	308.1	1.5
82.00	4.76	0.02	0.02	4.80	.42	.46	1153	1011.3	307.0	0.6

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39882.50	4.49	0.03	0.02	4.54	-17.45	-17.49	1139	1011.6	305.9	-0.3
83.00	4.30	0.03	0.02	4.35	.47	.51	1130	1011.9	304.8	-1.2
83.50	4.90	0.03	0.02	4.95	.42	.46	1157	1012.2	303.7	-2.1
84.00	4.81	0.04	0.01	4.86	.42	.47	1154	1012.4	302.6	-3.1
84.50	5.14	0.04	0.01	5.19	.39	.44	1170	1012.7	301.5	-4.0
85.00	5.51	0.04	0.01	5.56	.37	.41	1184	1013.0	300.4	-5.0
85.50	5.73	0.04	0.01	5.78	.35	.40	1191	1013.2	299.3	-6.0
86.00	5.42	0.03	0.01	5.46	.38	.43	1177	1013.4	298.2	-6.9
86.50	5.72	0.03	0.00	5.75	.36	.41	1186	1013.6	297.1	-7.9
87.00	5.59	0.01	0.00	5.60	.38	.42	1177	1013.9	296.0	-8.9
87.50	6.24	0.00	0.00	6.24	.34	.38	1200	1014.1	294.9	-9.9
88.00	6.70	0.00	0.00	6.70	.30	.34	1218	1014.3	293.8	-11.0
88.50	7.14	0.00	0.00	7.14	.27	.31	1231	1014.4	292.6	-12.0
89.00	7.10	0.00	0.00	7.10	.27	.32	1231	1014.6	291.5	-13.1
89.50	7.10	0.00	-0.01	7.09	.28	.32	1229	1014.7	290.4	-14.2
90.00	7.41	0.00	-0.01	7.40	.26	.31	1235	1014.9	289.2	-15.3
90.50	7.92	0.00	-0.01	7.91	.24	.28	1247	1015.0	288.1	-16.4
91.00	6.92	0.00	-0.01	6.90	.31	.35	1212	1015.1	286.9	-17.5
91.50	5.77	0.00	-0.01	5.76	.40	.44	1169	1015.2	285.8	-18.6
92.00	5.46	0.00	-0.01	5.44	.43	.47	1156	1015.3	284.6	-19.8
92.50	5.21	0.00	-0.02	5.19	.46	.49	1142	1015.3	283.4	-20.9
93.00	4.89	0.00	-0.02	4.87	.50	.53	1124	1015.4	282.2	-22.1
93.50	4.84	0.00	-0.02	4.82	.50	.53	1120	1015.4	281.1	-23.3
94.00	5.01	0.00	-0.02	4.99	.49	.52	1129	1015.4	279.8	-24.5
94.50	5.21	0.00	-0.02	5.19	.47	.50	1138	1015.4	278.6	-25.7
95.00	5.29	0.00	-0.02	5.26	.46	.49	1141	1015.4	277.4	-27.0
95.50	5.60	0.00	-0.02	5.57	.43	.47	1152	1015.3	276.2	-28.2
96.00	5.20	0.00	-0.02	5.18	.47	.50	1135	1015.2	274.9	-29.5
96.50	5.12	0.00	-0.02	5.10	.47	.51	1132	1015.1	273.6	-30.8
97.00	5.79	0.00	-0.02	5.77	.41	.45	1161	1015.0	272.3	-32.1
97.50	6.85	0.00	-0.02	6.83	.33	.37	1199	1014.9	271.0	-33.4
98.00	5.34	0.00	-0.02	5.32	.44	.48	1143	1014.7	269.7	-34.7
98.50	4.41	0.00	-0.02	4.39	.53	.57	1097	1014.6	268.3	-36.1
99.00	3.43	0.00	-0.02	3.41	.65	.68	1033	1014.4	266.9	-37.5
99.50	3.34	0.00	-0.02	3.32	.65	.69	1027	1014.1	265.5	-38.8
39900.00	3.77	0.00	-0.02	3.75	.60	.63	1058	1013.9	264.1	-40.2
00.50	3.36	0.00	-0.01	3.34	.65	.69	1027	1013.6	262.6	-41.6
01.00	4.11	0.00	-0.01	4.10	.56	.60	1077	1013.3	261.1	-43.0
01.50	3.92	0.00	-0.01	3.91	.57	.61	1067	1013.0	259.5	-44.5
02.00	4.17	0.00	-0.01	4.16	.54	.58	1083	1012.7	257.9	-45.9
02.50	3.61	0.00	-0.01	3.60	.60	.64	1047	1012.3	256.2	-47.3
03.00	3.46	0.00	0.00	3.46	.62	.66	1038	1011.9	254.5	-48.8
03.50	3.64	0.00	0.00	3.64	.59	.63	1050	1011.5	252.6	-50.3
04.00	3.93	0.00	0.00	3.93	.55	.60	1069	1011.1	250.7	-51.7
04.50	4.18	0.00	0.01	4.19	.52	.56	1085	1010.6	248.7	-53.2
05.00	4.42	0.00	0.01	4.43	.49	.54	1099	1010.1	246.6	-54.7
05.50	4.20	0.00	0.01	4.21	.51	.56	1086	1009.6	244.3	-56.1
06.00	3.82	0.00	0.01	3.83	.56	.60	1062	1009.1	241.8	-57.6
06.50	4.73	0.00	0.02	4.74	.45	.50	1114	1008.5	239.2	-59.1
07.00	4.75	0.00	0.02	4.76	.44	.49	1118	1007.9	236.3	-60.5
07.50	4.35	0.00	0.02	4.37	.48	.53	1097	1007.3	233.1	-61.9
08.00	4.17	0.00	0.02	4.19	.49	.54	1087	1006.7	229.6	-63.4
08.50	4.31	0.00	0.02	4.33	.47	.53	1094	1006.1	225.7	-64.7
09.00	4.32	0.00	0.02	4.34	.47	.52	1094	1005.4	221.2	-66.1
09.50	4.31	0.00	0.02	4.33	.47	.52	1093	1004.7	216.1	-67.4
10.00	4.35	0.00	0.01	4.37	.46	.52	1096	1003.9	210.3	-68.6
10.50	4.60	0.00	0.01	4.61	.43	.49	1108	1003.2	203.5	-69.7
11.00	4.69	0.00	0.01	4.70	.42	.48	1112	1002.4	195.8	-70.7
11.50	4.98	0.00	0.01	4.99	.39	.45	1125	1001.6	187.0	-71.5
12.00	5.23	0.00	0.00	5.23	.36	.43	1137	1000.8	177.2	-72.1

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39912.50	5.49	0.00	0.00	5.49	-17.33	-17.40	1147	999.9	166.8	-72.5
13.00	5.63	0.00	0.00	5.63	.31	.39	1154	999.1	156.1	-72.7
13.50	5.84	0.00	-0.01	5.83	.29	.37	1163	998.2	145.9	-72.6
14.00	6.24	0.00	-0.01	6.59	.22	.31	1191	997.3	137.4	-72.4
39914.20	6.89	0.00	-0.01	6.88	-17.19	-17.28	1203	996.9	134.3	-72.3
14.40	6.58	0.00	-0.01	6.56	.21	.31	1193	996.5	131.2	-72.1
14.60	7.06	0.00	-0.02	7.05	.18	.28	1205	996.2	128.3	-72.0
14.80	8.35	0.00	-0.02	8.33	.10	.20	1241	995.8	125.5	-71.8
15.00	9.90	0.00	-0.02	9.88	.02	.12	1279	995.4	122.8	-71.6
15.20	10.39	0.00	-0.02	10.37	-16.99	.10	1289	995.0	120.2	-71.4
15.40	9.54	0.00	-0.02	9.52	-17.03	.13	1270	994.6	117.8	-71.1
15.60	6.95	0.00	-0.02	6.93	.18	.28	1203	994.3	115.4	-70.9
15.80	5.97	0.00	-0.02	5.95	.25	.34	1170	993.9	113.2	-70.6
16.00	5.26	0.00	-0.02	5.23	.30	.40	1141	993.5	111.0	-70.4
16.20	5.48	0.00	-0.02	5.45	.28	.38	1150	993.1	109.0	-70.1
16.40	5.56	0.00	-0.03	5.54	.27	.37	1153	992.7	107.0	-69.8
16.60	5.65	0.00	-0.03	5.62	.26	.36	1156	992.3	105.1	-69.5
39917.00	6.35	0.00	-0.03	6.32	-17.21	-17.02	1180	991.4	101.6	-68.8
17.50	6.53	0.00	-0.03	6.50	.19	.01	1185	990.4	97.6	-68.0
18.00	6.44	0.00	-0.04	6.40	.19	.01	1182	989.4	94.0	-67.1
18.50	6.62	0.00	-0.04	6.58	.17	-16.99	1189	988.3	90.8	-66.1
19.00	7.19	-0.03	-0.04	7.12	.13	.95	1206	987.2	87.8	-65.2
19.50	7.36	-0.07	-0.05	7.25	.12	.94	1209	986.1	85.0	-64.2
20.00	7.45	-0.10	-0.05	7.30	.11	.93	1210	985.0	82.5	-63.2
20.50	6.79	-0.13	-0.05	6.60	.15	.97	1190	983.9	80.1	-62.2
21.00	6.09	-0.16	-0.06	5.87	.19	-17.03	1164	982.8	77.8	-61.2
21.50	5.57	-0.19	-0.06	5.32	.24	.08	1141	981.7	75.7	-60.1
22.00	5.38	-0.21	-0.06	5.10	.25	.10	1131	980.5	73.7	-59.1
22.50	5.25	-0.23	-0.07	4.95	.26	.11	1125	979.4	71.8	-58.1
23.00	5.14	-0.25	-0.07	4.83	.26	.12	1119	978.2	70.0	-57.0
23.50	5.05	-0.26	-0.07	4.71	.27	.13	1113	977.1	68.3	-56.0
24.00	4.93	-0.27	-0.07	4.59	.27	.14	1107	975.9	66.6	-54.9
24.50	4.72	-0.28	-0.08	4.36	.29	.16	1096	974.8	65.0	-53.9
25.00	4.74	-0.29	-0.08	4.38	.28	.15	1097	973.6	63.4	-52.8
25.50	4.88	-0.29	-0.08	4.50	.26	.13	1105	972.4	61.9	-51.8
26.00	4.98	-0.30	-0.08	4.60	.24	.12	1110	971.3	60.4	-50.8
26.50	4.96	-0.30	-0.09	4.57	.24	.12	1109	970.1	59.0	-49.7
27.00	5.02	-0.31	-0.09	4.62	.23	.11	1111	968.9	57.6	-48.7
27.50	5.16	-0.31	-0.09	4.76	.21	.09	1118	967.8	56.2	-47.7
28.00	5.14	-0.32	-0.09	4.73	.20	.09	1118	966.6	54.8	-46.7
28.50	5.24	-0.32	-0.10	4.83	.19	.08	1122	965.5	53.5	-45.7
29.00	5.30	-0.32	-0.10	4.88	.17	.07	1125	964.3	52.2	-44.7
29.50	5.35	-0.33	-0.10	4.93	.16	.05	1130	963.2	50.9	-43.7
30.00	5.65	-0.33	-0.10	5.22	.12	.01	1145	962.0	49.7	-42.7
30.50	5.65	-0.33	-0.10	5.22	.11	.01	1146	960.9	48.4	-41.8
31.00	5.35	-0.33	-0.11	4.91	.13	.03	1133	959.8	47.2	-40.8
31.50	5.18	-0.33	-0.11	4.74	.14	.05	1125	958.7	46.0	-39.9
32.00	5.21	-0.33	-0.11	4.78	.14	.04	1126	957.6	44.8	-38.9
32.50	5.09	-0.32	-0.11	4.65	.15	.06	1118	956.5	43.6	-38.0
33.00	5.14	-0.32	-0.11	4.71	.14	.05	1120	955.4	42.4	-37.1
33.50	5.21	-0.32	-0.11	4.77	.12	.04	1125	954.4	41.3	-36.2
34.00	5.31	-0.32	-0.11	4.87	.11	.03	1128	953.3	40.1	-35.3
34.50	5.40	-0.32	-0.12	4.96	.10	.02	1132	952.3	39.0	-34.4
35.00	5.58	-0.31	-0.12	5.15	.08	.00	1140	951.3	37.8	-33.6
35.50	5.77	-0.31	-0.12	5.34	.06	-16.99	1147	950.3	36.7	-32.7
36.00	5.87	-0.31	-0.12	5.44	.05	.98	1149	949.3	35.6	-31.9
36.50	5.98	-0.31	-0.12	5.55	.04	.98	1151	948.3	34.5	-31.0
37.00	6.09	-0.30	-0.12	5.67	.03	.97	1154	947.4	33.3	-30.2

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39937.50	6.24	-0.30	-0.12	5.81	-17.01	-16.95	1159	946.5	32.3	-29.4
38.00	6.37	-0.30	-0.12	5.95	.00	.94	1164	945.6	31.2	-28.6
38.50	6.78	-0.29	-0.13	6.36	-16.96	.91	1176	944.7	30.1	-27.8
39.00	7.88	-0.29	-0.13	7.47	.88	.84	1210	943.8	29.0	-27.0
39.50	9.14	-0.28	-0.13	8.73	.81	.76	1243	943.0	27.9	-26.3
40.00	8.94	-0.27	-0.13	8.54	.81	.77	1240	942.2	26.8	-25.5
40.50	8.96	-0.27	-0.13	8.57	.81	.76	1240	941.4	25.8	-24.8
41.00	8.93	-0.26	-0.13	8.54	.81	.77	1237	940.6	24.7	-24.0
41.50	9.09	-0.25	-0.13	8.71	.80	.76	1240	939.9	23.6	-23.3
42.00	9.29	-0.25	-0.13	8.91	.78	.75	1244	939.2	22.6	-22.6
42.50	9.53	-0.24	-0.13	9.15	.77	.74	1248	938.5	21.5	-21.9
43.00	9.71	-0.23	-0.13	9.35	.76	.74	1251	937.9	20.5	-21.2
43.50	10.11	-0.23	-0.13	9.75	.75	.72	1257	937.2	19.4	-20.5
44.00	10.27	-0.22	-0.13	9.92	.74	.72	1259	936.6	18.4	-19.8
44.50	10.40	-0.22	-0.13	10.05	.73	.71	1260	936.0	17.4	-19.2
45.00	10.50	-0.21	-0.13	10.16	.73	.71	1262	935.5	16.3	-18.5
45.50	10.59	-0.20	-0.13	10.25	.72	.70	1263	935.0	15.3	-17.9
46.00	10.62	-0.20	-0.13	10.30	.72	.71	1262	934.5	14.2	-17.2
46.50	10.87	-0.19	-0.13	10.55	.72	.70	1264	934.0	13.2	-16.6
47.00	11.33	-0.18	-0.13	11.02	.70	.68	1273	933.6	12.2	-16.0
47.50	12.32	-0.18	-0.13	12.01	.66	.65	1289	933.2	11.1	-15.3
48.00	9.67	-0.17	-0.13	9.37	.77	.76	1237	932.9	10.1	-14.7
48.50	7.75	-0.16	-0.13	7.46	.88	.87	1188	932.5	9.1	-14.1
49.00	7.96	-0.16	-0.12	7.67	.88	.87	1190	932.2	8.1	-13.5
49.50	8.00	-0.15	-0.12	7.73	.88	.87	1190	931.9	7.0	-12.9
50.00	8.45	-0.14	-0.12	8.18	.86	.85	1198	931.7	6.0	-12.3
50.50	8.35	-0.14	-0.12	8.09	.87	.86	1192	931.5	5.0	-11.8
51.00	8.22	-0.13	-0.12	7.97	.88	.88	1186	931.3	4.0	-11.2
51.50	7.95	-0.13	-0.12	7.70	.90	.90	1178	931.1	3.0	-10.6
52.00	8.20	-0.12	-0.12	7.97	.88	.88	1187	931.0	1.9	-10.0
52.50	8.69	-0.11	-0.11	8.47	.85	.85	1201	930.9	0.9	-9.5
53.00	7.72	-0.10	-0.11	7.50	.92	.91	1172	930.9	359.9	-8.9
53.50	5.99	-0.09	-0.11	5.78	-17.04	-17.04	1116	930.8	358.9	-8.3
54.00	5.29	-0.08	-0.11	5.10	.10	.10	1087	930.8	357.9	-7.8
54.50	4.89	-0.08	-0.11	4.71	.15	.14	1067	930.8	356.8	-7.2
55.00	4.83	-0.07	-0.11	4.66	.16	.16	1062	930.9	355.8	-6.7
55.50	4.81	-0.06	-0.11	4.64	.16	.16	1060	931.0	354.8	-6.1
56.00	4.87	-0.05	-0.10	4.71	.16	.15	1065	931.1	353.8	-5.5
56.50	4.94	-0.05	-0.10	4.79	.15	.15	1069	931.2	352.8	-5.0
57.00	5.34	-0.04	-0.10	5.20	.12	.11	1087	931.4	351.8	-4.4
57.50	5.72	-0.03	-0.10	5.58	.09	.08	1102	931.6	350.7	-3.8
58.00	5.76	-0.02	-0.10	5.64	.09	.08	1102	931.8	349.7	-3.3
58.50	6.22	-0.02	-0.10	6.11	.06	.05	1115	932.0	348.7	-2.7
59.00	6.48	-0.01	-0.10	6.37	.04	.04	1124	932.3	347.7	-2.1
59.50	6.70	0.00	-0.09	6.60	.03	.02	1132	932.6	346.6	-1.6
60.00	6.56	0.01	-0.09	6.48	.04	.03	1128	932.9	345.6	-1.0
60.50	6.35	0.01	-0.09	6.27	.06	.05	1122	933.2	344.6	-0.4
61.00	6.16	0.02	-0.09	6.09	.08	.07	1113	933.6	343.6	0.2
61.50	5.68	0.03	-0.09	5.62	.13	.11	1093	933.9	342.5	0.8
62.00	5.66	0.04	-0.08	5.62	.13	.12	1092	934.3	341.5	1.4
62.50	5.69	0.05	-0.08	5.65	.14	.12	1091	934.7	340.5	2.0
63.00	5.61	0.05	-0.08	5.58	.15	.13	1087	935.2	339.4	2.6
63.50	5.51	0.06	-0.08	5.49	.16	.14	1083	935.6	338.4	3.2
64.00	5.10	0.07	-0.08	5.09	.20	.18	1066	936.1	337.3	3.9
64.50	5.20	0.08	-0.07	5.20	.20	.18	1067	936.6	336.3	4.5
65.00	4.58	0.08	-0.07	4.59	.27	.25	1037	937.1	335.2	5.1
65.50	4.09	0.09	-0.07	4.11	.33	.31	1010	937.6	334.2	5.8
66.00	3.77	0.10	-0.07	3.80	.37	.35	991	938.1	333.1	6.5
66.50	3.79	0.11	-0.07	3.83	.37	.35	991	938.6	332.1	7.2
67.00	4.06	0.12	-0.06	4.11	.35	.33	1006	939.2	331.0	7.8

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39967.50	4.41	0.12	-0.06	4.46	-17.32	-17.29	1023	939.7	330.0	8.5
68.00	4.44	0.13	-0.06	4.50	.32	.29	1025	940.3	328.9	9.3
68.50	4.81	0.14	-0.06	4.89	.29	.26	1043	940.9	327.8	10.0
69.00	4.79	0.14	-0.06	4.88	.30	.26	1042	941.4	326.7	10.7
69.50	4.83	0.15	-0.05	4.93	.30	.26	1044	942.0	325.6	11.8
70.00	4.87	0.16	-0.05	4.98	.30	.27	1045	942.6	324.5	12.5
70.50	4.87	0.17	-0.05	4.99	.31	.27	1045	943.2	323.4	13.2
71.00	4.77	0.18	-0.05	4.89	.32	.29	1040	943.8	322.3	13.9
71.50	4.68	0.18	-0.04	4.82	.33	.30	1037	944.4	321.3	14.7
72.00	4.59	0.19	-0.04	4.74	.35	.31	1033	945.0	320.2	15.4
72.50	4.80	0.20	-0.04	4.95	.33	.29	1043	945.6	319.1	16.1
73.00	5.26	0.20	-0.04	5.42	.29	.25	1063	946.2	318.0	16.8
73.50	5.29	0.21	-0.04	5.46	.30	.25	1064	946.8	316.9	17.6
74.00	4.67	0.21	-0.03	4.85	.35	.31	1039	947.4	315.8	18.3
74.50	4.30	0.21	-0.03	4.48	.39	.35	1021	948.0	314.6	19.1
75.00	4.14	0.22	-0.03	4.33	.41	.36	1014	948.6	313.5	19.8
75.50	4.20	0.22	-0.03	4.39	.41	.36	1018	949.2	312.4	20.6
76.00	4.21	0.22	-0.03	4.40	.42	.36	1019	949.8	311.3	21.4
76.50	4.07	0.23	-0.03	4.27	.43	.38	1013	950.4	310.1	22.2
77.00	4.02	0.23	-0.02	4.22	.45	.39	1010	950.9	309.0	22.9
77.50	4.11	0.23	-0.02	4.31	.44	.38	1016	951.5	307.8	23.7
78.00	4.73	0.23	-0.02	4.93	.38	.32	1047	952.0	306.6	24.5
78.50	4.93	0.23	-0.02	5.13	.36	.30	1057	952.6	305.5	25.3
79.00	4.79	0.23	-0.02	4.99	.38	.32	1051	953.1	304.3	26.1
79.50	4.62	0.22	-0.02	4.83	.40	.33	1046	953.6	303.1	26.9
80.00	4.42	0.22	-0.01	4.62	.42	.36	1037	954.1	301.9	27.7
80.50	4.32	0.21	-0.01	4.52	.44	.37	1032	954.5	300.7	28.5
81.00	4.16	0.21	-0.01	4.35	.46	.39	1025	955.0	299.5	29.3
81.50	4.14	0.20	-0.01	4.34	.46	.39	1025	955.4	298.3	30.1
82.00	4.17	0.20	-0.01	4.36	.46	.39	1027	955.9	297.0	30.9
82.50	4.30	0.19	-0.01	4.48	.46	.39	1034	956.3	295.8	31.7
39982.80	4.53	0.18	-0.01	4.70	-17.44	-17.37	1044	956.5	295.0	32.2
83.00	5.06	0.18	-0.01	5.23	.39	.32	1067	956.7	294.5	32.6
83.20	6.38	0.17	0.00	6.54	.29	.22	1113	956.8	294.0	32.9
83.40	8.89	0.16	0.00	9.04	.13	.05	1179	956.9	293.5	33.2
83.60	9.42	0.15	0.00	9.56	.10	.00	1195	957.1	293.0	33.5
83.80	7.57	0.13	0.00	7.70	.19	.10	1155	957.2	292.4	33.9
84.00	6.39	0.12	0.00	6.50	.28	.19	1119	957.4	291.9	34.2
84.20	5.60	0.10	0.00	5.70	.35	.27	1090	957.5	291.4	34.5
84.40	4.81	0.08	0.00	4.89	.42	.34	1058	957.6	290.9	34.9
84.60	4.95	0.06	0.00	5.01	.42	.34	1062	957.8	290.3	35.2
84.80	4.95	0.04	0.00	4.99	.42	.35	1061	957.9	289.8	35.5
39985.00	5.09	0.02	0.00	5.11	-17.41	-17.33	1067	958.0	289.3	35.9
85.50	5.35	0.00	0.00	5.35	.38	.30	1079	958.3	287.9	36.7
86.00	5.45	0.00	0.00	5.45	.38	.29	1084	958.5	286.5	37.5
86.50	4.97	0.00	0.00	4.97	.42	.34	1066	958.7	285.1	38.4
87.00	4.94	0.00	0.00	4.94	.43	.35	1066	959.0	283.7	39.2
87.50	4.97	0.00	0.00	4.97	.42	.34	1070	959.1	282.2	40.1
88.00	5.12	0.00	0.00	5.13	.41	.32	1078	959.3	280.7	40.9
88.50	5.11	0.00	0.00	5.12	.41	.32	1079	959.4	279.2	41.8
89.00	4.26	0.00	0.00	4.26	.49	.41	1040	959.5	277.6	42.6
89.50	4.06	0.00	0.00	4.06	.52	.44	1031	959.6	276.0	43.5
90.00	4.16	0.00	0.00	4.16	.51	.43	1037	959.7	274.4	44.4
90.50	4.17	0.00	0.00	4.17	.51	.43	1039	959.7	272.7	45.2
91.00	4.19	0.00	0.00	4.19	.51	.43	1042	959.7	270.9	46.1
91.50	4.20	0.00	0.00	4.20	.51	.42	1044	959.7	269.1	46.9
92.00	4.11	0.00	0.00	4.12	.51	.43	1043	959.7	267.1	47.8
92.50	4.49	0.00	0.00	4.49	.47	.38	1063	959.6	265.2	48.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39993.00	4.57	0.00	0.00	4.58	-17.46	-17.38	1069	959.5	263.1	49.5
93.50	4.62	0.00	0.00	4.62	.45	.37	1073	959.4	260.9	50.4
94.00	4.81	0.00	0.00	4.81	.43	.33	1086	959.3	258.5	51.2
94.50	4.83	0.00	0.00	4.83	.41	.32	1091	959.1	256.1	52.1
95.00	5.23	0.00	0.00	5.23	.38	.28	1109	958.9	253.4	52.9
95.50	5.20	0.00	0.00	5.20	.38	.28	1110	958.7	250.6	53.7
96.00	5.18	0.00	0.00	5.18	.37	.27	1114	958.5	247.5	54.5
96.50	5.61	0.00	0.00	5.61	.32	.22	1133	958.2	244.2	55.3
97.00	5.94	0.00	0.00	5.94	.30	.20	1145	957.9	240.6	56.1
97.50	6.14	0.00	0.00	6.14	.27	.17	1155	957.6	236.7	56.8
98.00	6.22	0.00	0.00	6.21	.26	.16	1162	957.3	232.3	57.5
98.50	5.85	0.00	0.00	5.85	.29	.19	1151	957.0	227.5	58.1
99.00	5.68	0.00	0.00	5.68	.31	.22	1142	956.6	222.2	58.7
99.50	6.25	0.00	0.00	6.24	.27	.18	1158	956.2	216.3	59.3
40000.00	5.97	0.00	0.00	5.97	.28	.19	1155	955.8	209.8	59.7
00.50	6.02	0.00	0.00	6.01	.27	.18	1159	955.4	202.7	60.0
01.00	5.68	0.00	0.00	5.68	.31	.22	1145	954.9	195.0	60.3
01.50	5.56	0.00	0.00	5.56	.33	.24	1139	954.4	187.0	60.4
02.00	5.57	0.00	0.00	5.57	.33	.24	1139	953.9	178.8	60.4
02.50	5.48	0.00	0.00	5.48	.33	.26	1136	953.4	170.5	60.2
03.00	5.38	0.00	0.00	5.38	.35	.27	1131	952.9	162.5	59.9
03.50	5.46	0.00	0.00	5.46	.34	.26	1135	952.4	155.0	59.5
04.00	5.63	0.00	0.00	5.63	.32	.24	1144	951.8	147.9	59.0
04.50	5.82	0.00	0.00	5.82	.30	.23	1150	951.2	141.5	58.4
05.00	5.92	0.00	0.00	5.92	.29	.22	1154	950.6	135.7	57.7
05.50	6.17	0.00	0.00	6.17	.27	.20	1162	950.0	130.4	57.0
06.00	6.34	0.00	0.00	6.33	.26	.19	1168	949.4	125.7	56.2
06.50	5.93	0.00	0.00	5.93	.29	.22	1156	948.8	121.4	55.4
07.00	5.65	0.00	0.00	5.65	.31	.24	1148	948.1	117.5	54.5
07.50	5.37	0.00	0.00	5.37	.32	.27	1140	947.4	113.9	53.7
08.00	5.32	0.00	0.00	5.31	.33	.27	1138	946.8	110.7	52.8
08.50	5.43	0.00	0.00	5.43	.31	.26	1145	946.1	107.6	51.9
09.00	6.02	0.00	0.00	6.02	.25	.20	1168	945.4	104.8	50.9
09.50	5.96	0.00	-0.01	5.96	.25	.20	1167	944.7	102.2	50.0
10.00	5.86	0.00	-0.01	5.85	.26	.21	1164	943.9	99.7	49.1
10.50	5.69	0.00	-0.01	5.68	.27	.23	1159	943.2	97.3	48.1
11.00	5.64	0.00	-0.01	5.64	.28	.23	1157	942.5	95.1	47.1
11.50	5.26	0.00	-0.01	5.25	.31	.27	1144	941.7	93.0	46.2
12.00	4.81	0.00	-0.01	4.80	.35	.31	1128	941.0	91.0	45.2
12.50	4.65	0.00	-0.01	4.64	.37	.33	1122	940.2	89.0	44.3
13.00	4.57	0.00	0.00	4.57	.37	.34	1118	939.4	87.2	43.3
13.50	4.60	0.00	0.00	4.59	.37	.34	1119	938.7	85.4	42.3
14.00	4.88	0.00	0.00	4.87	.34	.31	1132	937.9	83.6	41.4
14.50	5.02	0.00	0.00	5.03	.31	.28	1143	937.1	81.9	40.4
15.00	6.14	0.01	0.00	6.15	.21	.19	1181	936.4	80.3	39.5
15.50	5.38	0.01	0.00	5.39	.26	.24	1160	935.6	78.7	38.5
16.00	6.07	0.00	0.00	6.07	.20	.18	1185	934.8	77.1	37.5
16.50	5.62	-0.03	0.00	5.60	.23	.21	1172	934.0	75.5	36.6
17.00	5.40	-0.10	0.00	5.31	.24	.23	1165	933.2	74.0	35.6
17.50	6.21	-0.14	0.01	6.08	.16	.15	1196	932.5	72.6	34.7
40017.80	7.10	-0.16	0.01	6.95	-17.10	-17.09	1222	932.0	71.7	34.1
18.00	9.46	-0.16	0.01	9.30	-16.98	-16.97	1268	931.7	71.1	33.7
18.20	9.85	-0.17	0.01	9.68	.94	.93	1284	931.4	70.5	33.3
18.40	8.79	-0.18	0.01	8.62	.95	.94	1280	931.1	70.0	33.0
18.60	7.21	-0.18	0.01	7.04	-17.03	-17.03	1245	930.8	69.4	32.6
18.80	6.81	-0.19	0.01	6.63	.08	.07	1228	930.5	68.9	32.2
19.00	6.67	-0.19	0.01	6.49	.10	.09	1220	930.2	68.3	31.8
19.20	6.53	-0.19	0.01	6.35	.11	.11	1213	929.9	67.7	31.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40019.50	6.45	-0.20	0.01	6.26	-17.12	-17.12	1210	929.4	66.9	30.9
20.00	6.56	-0.20	0.01	6.37	.11	.12	1213	928.7	65.5	30.0
20.50	6.54	-0.20	0.01	6.35	.10	.11	1215	927.9	64.2	29.0
21.00	5.78	-0.20	0.02	5.60	.16	.17	1193	927.2	62.9	28.1
21.50	5.34	-0.20	0.02	5.16	.20	.21	1177	926.5	61.6	27.2
22.00	4.77	-0.20	0.02	4.59	.25	.27	1156	925.8	60.3	26.3
22.50	5.04	-0.20	0.02	4.86	.24	.26	1159	925.1	59.0	25.4
23.00	5.05	-0.20	0.02	4.87	.24	.26	1159	924.4	57.7	24.4
23.50	5.13	-0.20	0.03	4.96	.23	.25	1163	923.7	56.4	23.5
24.00	5.43	-0.19	0.03	5.27	.19	.21	1179	923.1	55.2	22.6
24.50	5.82	-0.19	0.03	5.66	.14	.17	1195	922.4	53.9	21.7
25.00	5.70	-0.19	0.03	5.55	.16	.19	1188	921.8	52.7	20.8
25.50	5.35	-0.18	0.04	5.21	.19	.22	1177	921.1	51.5	20.0
26.00	5.15	-0.18	0.04	5.01	.19	.22	1176	920.5	50.2	19.1
26.50	5.07	-0.17	0.04	4.94	.19	.23	1176	920.0	49.0	18.2
27.00	4.87	-0.17	0.04	4.74	.20	.24	1170	919.4	47.8	17.3
27.50	4.70	-0.17	0.04	4.58	.22	.26	1162	918.8	46.6	16.5
28.00	4.62	-0.16	0.05	4.51	.23	.27	1159	918.3	45.4	15.6
28.50	4.64	-0.16	0.05	4.54	.22	.27	1161	917.8	44.3	14.7
29.00	4.79	-0.15	0.05	4.69	.20	.25	1167	917.3	43.1	13.9
29.50	4.87	-0.14	0.05	4.78	.18	.23	1177	916.8	41.9	13.0
30.00	5.04	-0.14	0.05	4.95	.15	.20	1188	916.3	40.7	12.2
30.50	4.91	-0.13	0.06	4.83	.16	.22	1182	915.9	39.6	11.3
31.00	4.84	-0.12	0.06	4.77	.17	.23	1178	915.5	38.4	10.5
31.50	4.77	-0.12	0.06	4.72	.18	.23	1175	915.1	37.3	9.7
32.00	4.70	-0.11	0.06	4.66	.18	.24	1173	914.7	36.1	8.8
32.50	4.72	-0.10	0.06	4.68	.18	.23	1175	914.3	35.0	8.0
33.00	4.73	-0.09	0.06	4.70	.16	.22	1179	914.0	33.8	7.2
33.50	4.83	-0.08	0.06	4.81	.14	.21	1187	913.7	32.7	6.4
34.00	4.88	-0.08	0.07	4.87	.14	.20	1188	913.4	31.5	5.6
34.50	4.90	-0.07	0.07	4.89	.14	.20	1187	913.1	30.4	4.8
35.00	4.86	-0.06	0.07	4.87	.14	.21	1186	912.9	29.3	4.0
35.50	4.81	-0.06	0.07	4.83	.15	.22	1181	912.6	28.1	3.2
36.00	4.78	-0.05	0.07	4.80	.16	.22	1178	912.4	27.0	2.4
36.50	4.79	-0.04	0.07	4.82	.16	.22	1179	912.2	25.9	1.6
37.00	4.97	-0.03	0.08	5.01	.13	.20	1190	912.1	24.8	0.8
37.50	4.83	-0.02	0.08	4.88	.14	.21	1185	911.9	23.7	0.0
38.00	4.69	-0.01	0.08	4.76	.16	.23	1177	911.8	22.5	-0.8
38.50	4.57	0.00	0.08	4.65	.17	.24	1172	911.7	21.4	-1.5
39.00	4.45	0.00	0.08	4.54	.19	.25	1165	911.6	20.3	-2.3
39.50	4.21	0.01	0.09	4.30	.22	.28	1154	911.6	19.2	-3.1
40.00	4.09	0.02	0.09	4.19	.23	.29	1148	911.5	18.1	-3.9
40.50	3.82	0.03	0.09	3.94	.25	.32	1138	911.5	17.0	-4.6
41.00	3.70	0.03	0.09	3.83	.28	.34	1129	911.5	15.9	-5.4
41.50	3.60	0.04	0.09	3.74	.29	.35	1121	911.6	14.8	-6.2
42.00	3.52	0.05	0.10	3.67	.30	.36	1117	911.6	13.7	-7.0
42.50	3.45	0.06	0.10	3.60	.31	.37	1112	911.7	12.6	-7.7
43.00	3.22	0.07	0.10	3.39	.34	.40	1100	911.8	11.5	-8.5
43.50	3.04	0.08	0.10	3.21	.37	.42	1089	911.9	10.4	-9.3
44.00	3.04	0.08	0.10	3.23	.36	.42	1089	912.0	9.3	-10.1
44.50	3.11	0.09	0.10	3.31	.35	.41	1093	912.2	8.2	-10.8
45.00	3.18	0.10	0.11	3.39	.34	.40	1099	912.3	7.1	-11.6
45.50	3.02	0.11	0.11	3.23	.36	.41	1091	912.5	6.0	-12.4
46.00	3.11	0.12	0.11	3.33	.34	.40	1099	912.7	5.0	-12.6
46.50	3.35	0.13	0.11	3.59	.31	.36	1113	913.0	3.9	-13.4
47.00	3.66	0.13	0.11	3.90	.26	.32	1133	913.2	2.8	-14.3
47.50	3.87	0.14	0.11	4.13	.22	.28	1149	913.5	1.6	-15.1
48.00	3.96	0.15	0.11	4.22	.21	.26	1155	913.7	0.5	-16.0
48.50	3.87	0.16	0.12	4.15	.23	.28	1147	914.0	359.4	-16.9
49.00	3.70	0.17	0.12	3.98	.25	.30	1136	914.3	358.3	-17.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40049.50	3.63	0.17	0.12	3.92	-17.26	-17.31	1132	914.7	357.2	-18.6
50.00	3.59	0.18	0.12	3.89	.27	.32	1128	915.0	356.1	-19.5
50.50	3.70	0.19	0.12	4.01	.25	.30	1133	915.4	355.0	-20.3
51.00	4.77	0.20	0.12	5.08	.14	.19	1182	915.7	353.9	-21.2
51.50	4.20	0.20	0.12	4.52	.19	.24	1159	916.1	352.8	-22.0
52.00	3.88	0.21	0.12	4.21	.24	.28	1138	916.5	351.7	-22.9
52.50	3.73	0.21	0.12	4.06	.26	.30	1127	916.9	350.6	-23.7
53.00	3.63	0.22	0.12	3.97	.28	.32	1120	917.4	349.5	-24.5
53.50	3.45	0.23	0.12	3.80	.30	.34	1110	917.8	348.4	-25.3
54.00	3.41	0.23	0.12	3.77	.31	.34	1106	918.3	347.3	-26.1
54.50	3.44	0.24	0.12	3.79	.31	.34	1105	918.7	346.2	-26.9
55.00	3.60	0.24	0.12	3.97	.29	.32	1113	919.2	345.2	-27.6
55.50	3.85	0.25	0.12	4.22	.26	.29	1124	919.7	344.1	-28.4
56.00	4.33	0.25	0.12	4.71	.22	.25	1143	920.1	343.0	-29.1
56.50	3.87	0.25	0.12	4.24	.27	.30	1120	920.6	341.9	-29.9
57.00	3.42	0.26	0.12	3.80	.32	.34	1096	921.1	340.8	-30.6
57.50	3.29	0.26	0.12	3.67	.34	.36	1087	921.7	339.7	-31.3
58.00	3.23	0.27	0.12	3.62	.35	.37	1083	922.2	338.7	-32.0
58.50	3.26	0.27	0.12	3.65	.35	.36	1084	922.7	337.6	-32.7
59.00	3.46	0.27	0.12	3.85	.32	.34	1094	923.2	336.5	-33.4
59.50	3.89	0.27	0.12	4.28	.28	.29	1116	923.8	335.4	-34.1
60.00	4.04	0.28	0.12	4.44	.26	.28	1122	924.3	334.4	-34.7
60.50	3.48	0.28	0.12	3.88	.32	.34	1092	924.8	333.3	-35.4
61.00	3.28	0.28	0.12	3.68	.35	.36	1079	925.4	332.2	-36.1
61.50	3.20	0.28	0.12	3.61	.36	.37	1074	925.9	331.1	-36.7
62.00	3.08	0.29	0.12	3.49	.37	.38	1066	926.4	330.1	-37.4
62.50	3.11	0.29	0.12	3.51	.37	.38	1065	927.0	329.0	-38.0
63.00	3.12	0.29	0.12	3.52	.37	.38	1064	927.5	327.9	-38.7
63.50	3.21	0.29	0.11	3.61	.36	.37	1069	928.1	326.8	-39.3
64.00	3.40	0.29	0.11	3.80	.34	.35	1079	928.6	325.7	-40.0
64.50	3.28	0.29	0.11	3.68	.36	.36	1070	929.1	324.7	-40.7
65.00	3.17	0.29	0.11	3.56	.37	.38	1061	929.7	323.6	-41.4
65.50	3.01	0.29	0.11	3.41	.39	.39	1050	930.2	322.5	-42.0
66.00	2.89	0.28	0.11	3.29	.41	.41	1039	930.7	321.4	-42.7
66.50	2.86	0.28	0.11	3.26	.42	.41	1036	931.2	320.3	-43.5
67.00	2.73	0.28	0.11	3.12	.43	.43	1024	931.7	319.2	-44.2
67.50	2.68	0.28	0.11	3.07	.44	.44	1018	932.2	318.1	-44.9
68.00	2.70	0.28	0.11	3.08	.44	.44	1017	932.7	317.0	-45.7
68.50	2.67	0.27	0.10	3.05	.45	.44	1013	933.2	315.9	-46.5
69.00	2.63	0.27	0.10	3.00	.45	.45	1008	933.7	314.8	-47.3
69.50	2.59	0.27	0.10	2.95	.46	.45	1003	934.2	313.6	-48.1
70.00	2.53	0.26	0.10	2.89	.47	.46	996	934.6	312.5	-48.9
70.50	2.47	0.26	0.10	2.83	.48	.47	989	935.1	311.4	-49.8
71.00	2.62	0.26	0.10	2.97	.46	.45	999	935.5	310.2	-50.7
71.50	2.82	0.25	0.09	3.17	.43	.42	1013	935.9	309.0	-51.7
72.00	2.89	0.25	0.09	3.24	.42	.41	1016	936.3	307.9	-52.6
72.50	2.85	0.25	0.09	3.18	.43	.42	1011	936.7	306.7	-53.6
73.00	2.82	0.24	0.09	3.16	.43	.42	1009	937.1	305.4	-54.7
73.50	2.82	0.24	0.09	3.15	.43	.42	1005	937.5	304.2	-55.7
74.00	2.87	0.23	0.08	3.19	.43	.41	1005	937.8	303.0	-56.8
74.50	2.96	0.22	0.08	3.27	.42	.40	1010	938.2	301.7	-58.0
75.00	2.87	0.22	0.08	3.16	.43	.42	1000	938.5	300.4	-59.2
75.50	2.86	0.21	0.08	3.15	.43	.42	996	938.8	299.1	-60.4
76.00	2.88	0.20	0.07	3.16	.43	.41	996	939.1	297.7	-61.7
76.50	3.05	0.20	0.07	3.32	.41	.39	1009	939.4	296.3	-63.0
77.00	2.97	0.19	0.07	3.23	.42	.40	1001	939.7	294.9	-64.3
77.50	2.88	0.18	0.07	3.13	.43	.41	992	939.9	293.4	-65.7
78.00	2.85	0.17	0.06	3.09	.43	.41	987	940.1	291.9	-67.2
78.50	2.85	0.17	0.06	3.08	.43	.41	985	940.4	290.3	-68.7
79.00	2.88	0.16	0.06	3.09	.43	.41	987	940.6	288.6	-70.2

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40079.50	2.91	0.15	0.06	3.11	-17.42	-17.40	988	940.7	286.9	-71.8
80.00	2.92	0.14	0.05	3.11	.42	.40	989	940.9	285.0	-73.4
80.50	2.92	0.13	0.05	3.10	.42	.39	987	941.0	283.0	-75.0
81.00	2.94	0.11	0.05	3.11	.41	.39	987	941.2	280.9	-76.7
81.50	3.08	0.10	0.05	3.23	.39	.37	997	941.3	278.5	-78.4
82.00	3.57	0.09	0.05	3.71	.34	.31	1030	941.4	276.0	-80.2
82.50	3.84	0.08	0.04	3.97	.31	.29	1043	941.4	273.1	-81.9
83.00	4.20	0.07	0.04	4.31	.28	.25	1064	941.5	269.8	-83.7
83.50	4.27	0.06	0.04	4.37	.27	.24	1066	941.5	266.0	-85.5
84.00	4.17	0.05	0.04	4.25	.28	.25	1058	941.5	261.4	-87.3
84.50	4.25	0.04	0.03	4.33	.27	.24	1063	941.5	255.9	-89.0
85.00	4.31	0.03	0.03	4.36	.27	.24	1062	941.5	249.0	-90.6
85.50	3.80	0.01	0.03	3.85	.32	.30	1028	941.5	240.3	-92.0
86.00	3.66	0.00	0.03	3.69	.34	.31	1022	941.4	229.1	-93.2
86.50	3.62	0.00	0.03	3.65	.33	.31	1024	941.4	212.4	-94.2
87.00	3.57	0.00	0.02	3.60	.34	.31	1022	941.3	196.2	-94.3
87.50	3.44	0.00	0.02	3.47	.35	.33	1015	941.2	179.9	-93.8
88.00	3.36	0.00	0.02	3.38	.36	.33	1011	941.0	165.5	-92.8
88.50	3.28	0.00	0.02	3.30	.36	.34	1007	940.9	153.7	-91.3
89.00	3.18	0.00	0.02	3.20	.38	.36	1000	940.7	144.5	-89.6
89.50	3.11	0.00	0.01	3.12	.39	.37	995	940.6	137.2	-87.6
90.00	3.07	0.00	0.01	3.08	.39	.37	993	940.4	131.3	-85.5
90.50	3.08	0.00	0.01	3.09	.39	.37	995	940.2	126.6	-83.3
91.00	3.07	0.00	0.01	3.07	.40	.38	993	939.9	122.5	-81.1
91.50	3.11	0.00	0.01	3.12	.39	.37	997	939.7	119.1	-78.8
92.00	3.82	0.00	0.00	3.83	.30	.28	1051	939.4	116.1	-76.6
92.50	3.68	0.00	0.00	3.68	.32	.30	1041	939.2	113.4	-74.3
93.00	3.16	0.00	0.00	3.16	.39	.37	1006	938.9	111.0	-72.1
93.50	3.04	0.00	0.00	3.04	.40	.38	1000	938.6	108.8	-69.8
94.00	2.95	0.00	0.00	2.94	.41	.40	993	938.2	106.8	-67.6
94.50	2.95	0.00	-0.01	2.95	.41	.40	995	937.9	104.8	-65.4
95.00	2.95	0.00	-0.01	2.94	.41	.40	996	937.6	103.0	-63.3
95.50	2.87	0.00	-0.01	2.86	.43	.41	990	937.2	101.3	-61.2
96.00	2.83	0.00	-0.01	2.82	.43	.42	988	936.8	99.7	-59.1
96.50	2.84	0.00	-0.01	2.83	.43	.42	991	936.5	98.2	-57.0
97.00	2.89	0.00	-0.02	2.87	.42	.41	997	936.1	96.7	-55.0
97.50	2.88	0.00	-0.02	2.86	.42	.41	998	935.7	95.2	-53.0
98.00	2.95	0.00	-0.02	2.93	.41	.40	1005	935.2	93.8	-51.1
98.50	3.12	0.00	-0.02	3.11	.38	.37	1022	934.8	92.5	-49.2
99.00	3.39	0.00	-0.02	3.37	.34	.34	1042	934.4	91.1	-47.4
99.50	3.90	0.00	-0.02	3.88	.28	.27	1076	933.9	89.8	-45.6
40100.00	4.41	0.00	-0.02	4.39	.22	.21	1105	933.5	88.5	-43.8
00.50	3.97	0.00	-0.02	3.95	.27	.26	1082	933.0	87.3	-42.1
01.00	3.95	0.00	-0.02	3.93	.27	.26	1083	932.5	86.1	-40.4
01.50	4.02	0.00	-0.03	3.99	.26	.25	1087	932.1	84.9	-38.8
02.00	4.22	0.00	-0.03	4.19	.23	.22	1100	931.6	83.7	-37.2
02.50	4.54	0.00	-0.03	4.51	.19	.19	1118	931.1	82.5	-35.7
03.00	4.50	0.00	-0.03	4.46	.19	.19	1118	930.6	81.3	-34.1
03.50	4.51	0.00	-0.03	4.48	.18	.18	1122	930.1	80.2	-32.7
04.00	4.59	0.00	-0.03	4.56	.17	.17	1126	929.6	79.0	-31.2
04.50	4.50	0.00	-0.03	4.47	.17	.18	1123	929.1	77.9	-29.9
05.00	4.50	0.00	-0.04	4.46	.17	.17	1124	928.5	76.8	-28.5
05.50	4.86	0.00	-0.04	4.83	.13	.14	1140	928.0	75.7	-27.2
06.00	5.15	0.00	-0.04	5.11	.10	.11	1153	927.5	74.6	-25.9
06.50	6.05	0.00	-0.04	6.01	.03	.04	1184	927.0	73.5	-24.6
07.00	7.49	0.00	-0.04	7.45	-16.93	-16.94	1228	926.5	72.4	-23.4
07.50	7.76	0.00	-0.04	7.72	.89	.91	1240	925.9	71.4	-22.2
08.00	6.42	0.00	-0.04	6.38	.98	.99	1202	925.4	70.3	-21.0
08.50	6.01	0.00	-0.05	5.97	-17.01	-17.02	1187	924.9	69.3	-19.9
09.00	5.87	0.00	-0.05	5.82	.02	.03	1181	924.4	68.2	-18.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40109.50	5.88	0.00	-0.05	5.83	-17.01	-17.03	1181	923.9	67.1	-17.6
10.00	5.87	-0.01	-0.05	5.81	.01	.03	1180	923.3	66.1	-16.5
10.50	6.30	-0.02	-0.05	6.23	-16.98	.00	1193	922.8	65.1	-15.5
11.00	6.87	-0.03	-0.05	6.79	.94	-16.96	1209	922.3	64.0	-14.4
11.50	7.38	-0.04	-0.05	7.30	.89	.92	1225	921.8	63.0	-13.4
12.00	8.16	-0.04	-0.05	8.07	.84	.87	1249	921.3	62.0	-12.4
12.50	8.82	-0.04	-0.05	8.72	.79	.83	1266	920.8	60.9	-11.4
13.00	8.40	-0.05	-0.06	8.30	.81	.85	1256	920.3	59.9	-10.4
13.50	7.81	-0.05	-0.06	7.70	.84	.88	1240	919.9	58.9	-9.4
14.00	7.51	-0.05	-0.06	7.40	.86	.90	1230	919.4	57.8	-8.4
14.50	7.34	-0.05	-0.06	7.23	.87	.91	1224	918.9	56.8	-7.4
15.00	7.43	-0.05	-0.06	7.32	.87	.91	1224	918.5	55.8	-6.4
15.50	6.88	-0.05	-0.06	6.77	.91	.95	1203	918.0	54.8	-5.4
16.00	6.35	-0.04	-0.06	6.24	.95	-17.00	1183	917.6	53.8	-4.5
16.50	5.74	-0.04	-0.06	5.63	-17.00	.04	1161	917.1	52.7	-3.5
17.00	5.75	-0.04	-0.06	5.65	.00	.04	1158	916.7	51.7	-2.5
17.50	5.83	-0.03	-0.06	5.73	.00	.04	1158	916.3	50.7	-1.5
18.00	6.22	-0.03	-0.06	6.12	-16.97	.01	1169	915.9	49.7	-1.0
18.50	6.55	-0.02	-0.06	6.47	.94	-16.99	1181	915.5	48.8	-0.5
19.00	6.01	-0.02	-0.06	5.92	.97	-17.03	1162	915.1	47.8	0.1
19.50	5.73	-0.01	-0.06	5.66	-17.00	.05	1150	914.8	46.9	0.6
20.00	5.78	-0.01	-0.06	5.71	-16.99	.04	1151	914.4	45.9	1.1
20.50	5.85	0.00	-0.06	5.78	.98	.03	1156	914.1	45.0	1.6
21.00	5.98	0.00	-0.06	5.92	.96	.02	1160	913.7	44.0	2.1
21.50	6.08	0.01	-0.07	6.03	.95	.01	1163	913.4	43.1	2.6
22.00	6.29	0.01	-0.07	6.24	.93	-16.99	1171	913.1	42.1	3.1
22.50	6.24	0.02	-0.07	6.20	.93	.99	1171	912.8	41.2	3.6
23.00	6.29	0.02	-0.07	6.25	.93	.99	1166	912.5	40.2	4.1
23.50	6.18	0.03	-0.07	6.15	.95	-17.01	1157	912.2	39.2	4.6
24.00	5.90	0.03	-0.07	5.86	.97	.03	1148	912.0	38.3	5.2
24.50	6.01	0.03	-0.07	5.97	.95	.01	1153	911.7	37.3	5.7
25.00	6.18	0.02	-0.07	6.13	.93	.00	1160	911.5	36.4	6.3
25.50	6.44	0.02	-0.07	6.39	.90	-16.97	1170	911.3	35.4	6.9
26.00	6.83	0.02	-0.07	6.78	.88	.94	1181	911.1	34.4	7.5
26.50	7.16	0.02	-0.07	7.11	.86	.92	1188	910.9	33.4	8.2
27.00	7.47	0.02	-0.07	7.42	.84	.90	1195	910.7	32.4	8.8
27.50	7.74	0.03	-0.07	7.70	.82	.89	1202	910.5	31.5	9.5
28.00	7.99	0.03	-0.07	7.95	.80	.87	1209	910.4	30.5	10.2
28.50	8.19	0.04	-0.07	8.15	.79	.86	1211	910.2	29.5	11.0
29.00	8.39	0.04	-0.07	8.36	.78	.85	1212	910.1	28.5	11.8
29.50	8.60	0.05	-0.07	8.58	.78	.85	1213	910.0	27.5	12.6
30.00	8.96	0.05	-0.07	8.95	.76	.83	1220	909.8	26.5	13.4
30.50	9.43	0.06	-0.07	9.42	.74	.81	1228	909.7	25.4	14.3
31.00	9.28	0.06	-0.07	9.27	.75	.82	1221	909.7	24.4	15.2
31.50	9.76	0.07	-0.07	9.76	.72	.80	1232	909.6	23.4	16.1
32.00	10.08	0.08	-0.07	10.09	.71	.78	1235	909.5	22.4	17.0
32.50	8.67	0.08	-0.07	8.68	.78	.86	1201	909.5	21.3	18.0
33.00	8.08	0.08	-0.07	8.10	.83	.90	1180	909.4	20.3	19.0
33.50	7.78	0.09	-0.07	7.80	.86	.92	1167	909.4	19.2	20.0
34.00	7.31	0.10	-0.07	7.34	.88	.95	1154	909.4	18.2	21.1
34.50	6.54	0.10	-0.07	6.58	.93	-17.00	1131	909.3	17.1	22.2
35.00	6.82	0.11	-0.07	6.85	.92	-16.99	1135	909.3	16.0	23.3
35.50	7.44	0.12	-0.07	7.49	.88	.95	1150	909.3	15.0	24.4
36.00	7.53	0.12	-0.07	7.58	.87	.95	1152	909.4	13.9	25.5
36.50	7.65	0.13	-0.07	7.70	.87	.94	1153	909.4	12.8	26.7
37.00	8.51	0.14	-0.07	8.57	.82	.90	1171	909.4	11.7	27.9
37.50	8.58	0.14	-0.07	8.65	.83	.90	1169	909.4	10.6	29.1
38.00	7.31	0.15	-0.07	7.39	.90	.97	1133	909.5	9.5	30.3
38.50	6.57	0.15	-0.07	6.66	.95	-17.02	1109	909.5	8.4	31.5
39.00	6.86	0.16	-0.07	6.95	.94	.01	1112	909.6	7.3	32.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40139.50	7.16	0.17	-0.07	7.26	-16.93	-17.00	1116	909.7	6.2	34.0
40.00	7.22	0.17	-0.07	7.33	.94	.00	1112	909.7	5.0	35.2
40.50	7.58	0.18	-0.07	7.69	.92	-16.98	1117	909.8	3.9	36.5
41.00	8.42	0.18	-0.07	8.54	.88	.94	1136	909.9	2.8	37.7
41.50	8.90	0.19	-0.07	9.02	.85	.91	1148	910.0	1.6	39.0
42.00	10.18	0.19	-0.07	10.30	.79	.86	1173	910.1	0.5	40.2
42.50	9.07	0.20	-0.07	9.20	.85	.91	1146	910.2	359.3	41.5
43.00	7.07	0.20	-0.07	7.20	.96	-17.03	1091	910.3	358.2	42.7
43.50	6.24	0.21	-0.07	6.38	-17.02	.08	1059	910.4	357.0	43.9
44.00	6.58	0.21	-0.07	6.73	.01	.06	1065	910.5	355.8	45.2
44.50	6.78	0.22	-0.07	6.93	.00	.05	1067	910.6	354.6	46.4
45.00	6.81	0.22	-0.07	6.97	.00	.05	1065	910.8	353.5	47.6
45.50	6.91	0.22	-0.07	7.07	.00	.05	1065	910.9	352.3	48.8
46.00	6.91	0.23	-0.07	7.07	.00	.05	1062	911.0	351.1	50.0
46.50	6.91	0.23	-0.07	7.07	.00	.05	1059	911.1	349.9	51.1
47.00	7.05	0.23	-0.07	7.21	-16.99	.05	1060	911.3	348.7	52.3
47.50	7.02	0.23	-0.07	7.19	-17.00	.05	1056	911.4	347.5	53.4
48.00	7.07	0.23	-0.07	7.23	.00	.05	1054	911.5	346.3	54.5
48.50	7.31	0.23	-0.07	7.48	-16.99	.04	1059	911.7	345.1	55.6
49.00	7.70	0.23	-0.07	7.86	.97	.02	1068	911.8	343.9	56.6
49.50	7.60	0.23	-0.07	7.76	.97	.02	1062	912.0	342.7	57.6
50.00	7.37	0.23	-0.07	7.53	.99	.04	1053	912.1	341.5	58.6
50.50	7.30	0.23	-0.07	7.47	.99	.04	1049	912.2	340.2	59.6
51.00	7.30	0.23	-0.07	7.46	.99	.04	1046	912.4	339.0	60.6
51.50	7.31	0.23	-0.07	7.47	.99	.04	1044	912.5	337.8	61.5
52.00	7.43	0.22	-0.07	7.59	.99	.03	1046	912.6	336.6	62.3
52.50	7.60	0.22	-0.07	7.75	.98	.03	1048	912.8	335.4	63.2
53.00	7.97	0.22	-0.07	8.12	.96	.01	1057	912.9	334.2	64.0
53.50	8.27	0.21	-0.06	8.42	.95	-16.99	1063	913.0	333.0	64.8
54.00	9.88	0.21	-0.06	10.02	.87	.92	1100	913.1	331.8	65.6
54.50	9.31	0.21	-0.06	9.45	.90	.95	1085	913.3	330.6	66.3
40154.75	8.56	0.20	0.00	8.76	-16.95	-17.01	1052	913.3	330.2	66.4
55.00	7.97	0.20	0.00	8.18	.59	.04	1034	913.4	328.6	68.7
55.25	6.87	0.20	-0.06	7.01	-17.05	.10	995	913.4	327.1	70.8
55.50	6.89	0.20	-0.06	7.03	.05	.09	995	913.5	325.6	72.5
55.75	7.14	0.20	-0.06	7.28	.03	.07	1003	913.6	324.2	74.1
56.00	7.44	0.19	-0.06	7.58	.02	.06	1011	913.6	322.9	75.4
56.25	7.89	0.19	-0.06	8.02	-16.99	.04	1023	913.7	321.6	76.4
56.50	8.15	0.19	-0.06	8.28	.98	.02	1031	913.7	320.5	77.3
56.75	8.38	0.19	-0.06	8.51	.96	.00	1038	913.8	319.8	78.0
57.00	8.51	0.19	-0.06	8.64	.95	-16.99	1043	913.8	318.6	78.5
57.25	8.46	0.18	-0.06	8.58	.95	.99	1043	913.9	317.9	78.9
57.50	8.30	0.18	-0.06	8.42	.96	-17.00	1038	913.9	317.3	79.1
57.75	8.21	0.18	-0.06	8.33	.96	.00	1035	913.9	316.8	79.2
58.00	8.26	0.18	-0.06	8.38	.96	.00	1036	914.0	316.5	79.1
58.25	10.76	0.18	-0.06	10.88	.85	-16.89	1097	914.0	316.3	79.0
58.50	14.24	0.17	-0.06	14.35	.73	.77	1160	914.1	316.1	78.7
58.75	16.54	0.17	-0.06	16.66	.67	.71	1192	914.1	316.1	78.3
59.00	12.64	0.17	-0.06	12.76	.79	.83	1130	914.1	316.0	77.8
59.25	10.87	0.17	-0.06	10.98	.85	.89	1097	914.2	316.1	77.3
59.50	10.65	0.16	-0.06	10.76	.85	.90	1095	914.2	316.2	76.6
59.75	10.33	0.16	-0.05	10.44	.87	.91	1086	914.3	316.3	76.0
60.00	12.14	0.16	-0.05	12.24	.80	.84	1124	914.3	316.4	75.2
60.25	13.77	0.16	-0.05	13.87	.75	.79	1153	914.3	316.5	74.4
60.50	16.87	0.15	-0.05	16.97	.66	.71	1197	914.3	316.6	73.5
60.75	20.29	0.15	-0.05	20.39	.58	.63	1235	914.4	316.7	72.7
61.00	18.99	0.15	-0.05	19.09	.61	.66	1221	914.4	316.7	71.7
61.25	17.19	0.15	-0.05	17.28	.65	.70	1202	914.4	316.8	70.8
61.50	17.76	0.15	-0.05	17.86	.64	.68	1212	914.4	316.8	69.8

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40161.75	21.46	0.14	-0.05	21.55	-16.56	-16.61	1250	914.5	316.8	68.9
62.00	23.25	0.14	-0.05	23.34	.53	.58	1265	914.5	316.8	67.9
62.25	15.46	0.14	-0.05	15.55	.71	.76	1176	914.5	316.8	66.9
62.50	15.09	0.14	-0.05	15.18	.72	.77	1172	914.5	316.7	66.0
62.75	11.66	0.13	-0.05	11.74	.83	.87	1117	914.5	316.6	65.0
63.00	9.70	0.13	-0.05	9.78	.91	.95	1074	914.5	316.5	64.1
63.25	12.19	0.13	-0.05	12.26	.82	.86	1126	914.5	316.4	63.2
63.50	9.39	0.12	-0.05	9.47	.93	.97	1067	914.5	316.2	62.4
63.75	8.24	0.12	-0.05	8.31	.99	-17.03	1036	914.5	316.0	61.5
64.00	7.90	0.12	-0.05	7.97	-17.01	.05	1026	914.6	315.8	60.7
64.25	7.23	0.11	-0.05	7.30	.05	.08	1005	914.6	315.6	60.0
64.50	5.82	0.11	-0.05	5.87	.14	.18	947	914.6	315.4	59.3
64.75	8.35	0.11	-0.05	8.40	-16.99	.03	1038	914.6	315.1	58.6
65.00	9.47	0.10	-0.05	9.53	.94	-16.98	1068	914.6	314.8	58.0
65.25	8.62	0.09	-0.05	8.66	.98	-17.02	1047	914.5	314.5	57.5
65.50	6.94	0.09	-0.05	6.98	-17.07	.11	996	914.5	314.2	57.0
65.75	6.33	0.08	-0.05	6.37	.11	.15	972	914.5	313.8	56.6
66.00	5.56	0.08	-0.05	5.59	.17	.21	938	914.5	313.4	56.2
66.25	5.11	0.08	-0.05	5.14	.21	.25	916	914.5	313.1	55.9
66.50	4.66	0.08	-0.05	4.69	.25	.29	892	914.5	312.7	55.7
66.75	4.87	0.07	-0.05	4.89	.24	.27	902	914.5	312.2	55.6
67.00	7.46	0.07	-0.05	7.49	.06	.09	1009	914.5	311.8	55.5
67.25	7.67	0.07	-0.05	7.69	.05	.09	1011	914.4	311.3	55.5
67.50	8.04	0.06	-0.05	8.06	.03	.07	1020	914.4	310.8	55.6
67.75	7.68	0.06	-0.05	7.70	.05	.09	1009	914.4	310.3	55.7
68.00	6.83	0.06	-0.05	6.85	.10	.13	983	914.4	309.8	56.0
40168.50	7.52	0.06	-0.04	7.53	-17.06	-17.09	1004	914.3	308.7	56.7
69.00	7.65	0.05	-0.04	7.66	.06	.10	1002	914.3	307.5	57.8
69.50	7.70	0.05	-0.04	7.70	.06	.10	998	914.2	306.2	59.1
70.00	7.54	0.04	-0.04	7.55	.07	.10	991	914.1	304.8	60.8
70.50	7.34	0.04	-0.04	7.34	.08	.11	982	914.1	303.3	62.8
71.00	6.87	0.03	-0.04	6.86	.11	.14	959	914.0	301.6	65.2
71.50	6.59	0.03	-0.04	6.58	.12	.16	945	913.9	299.7	67.8
72.00	6.41	0.02	-0.04	6.39	.12	.16	939	913.8	297.6	70.8
72.50	6.10	0.02	-0.04	6.08	.13	.16	928	913.7	295.2	74.0
73.00	5.95	0.01	-0.04	5.93	.13	.16	922	913.6	292.4	77.5
73.50	6.07	0.01	-0.03	6.04	.11	.15	925	913.5	289.0	81.2
74.00	6.14	0.00	-0.03	6.10	.10	.14	925	913.4	284.7	85.1
74.50	6.27	0.00	-0.03	6.24	.08	.12	932	913.2	278.8	89.1
75.00	6.38	-0.01	-0.03	6.34	.07	.10	936	913.1	270.1	93.1
75.50	6.37	-0.01	-0.03	6.33	.07	.10	935	913.0	256.1	96.9
76.00	6.42	-0.02	-0.03	6.37	.06	.09	938	912.8	231.9	99.6
76.50	6.78	-0.02	-0.03	6.73	.04	.08	947	912.7	197.9	100.1
40177.00	7.43	-0.02	-0.03	7.38	-17.02	-17.06	960	912.5	169.4	97.9
77.25	7.80	-0.03	-0.03	7.74	-16.99	.03	980	912.4	159.7	96.1
77.50	8.19	-0.03	-0.03	8.13	.97	.01	996	912.4	152.4	94.0
77.75	8.77	-0.03	-0.02	8.71	.95	-16.98	1014	912.3	146.7	91.8
78.00	9.78	-0.04	-0.02	9.72	.91	.95	1039	912.2	142.2	89.5
78.25	9.27	-0.04	-0.02	9.21	.95	.98	1020	912.1	138.5	87.0
78.50	6.82	-0.04	-0.02	6.75	-17.09	-17.13	936	912.0	135.4	84.5
40179.00	6.33	-0.04	-0.02	6.27	-17.10	-17.14	936	911.9	130.5	79.4
79.50	5.71	-0.04	-0.02	5.65	.16	.19	913	911.7	126.7	74.1
80.00	6.65	-0.05	-0.02	6.58	.09	.13	964	911.5	123.5	68.8
80.50	7.58	-0.05	-0.02	7.51	.05	.10	1002	911.3	120.8	63.5
81.00	7.98	-0.05	-0.02	7.91	.05	.09	1019	911.1	118.3	58.2
81.50	6.89	-0.05	-0.02	6.82	.11	.16	994	910.9	116.1	52.9
82.00	6.57	-0.05	-0.02	6.50	.14	.19	991	910.7	114.1	47.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40182.50	6.19	-0.05	-0.02	6.12	-17.18	-17.22	986	910.5	112.1	42.7
83.00	5.91	-0.05	-0.02	5.85	.20	.25	985	910.3	110.3	37.7
83.50	6.11	-0.04	-0.02	6.05	.19	.24	1003	910.1	108.5	32.9
84.00	6.40	-0.04	-0.02	6.34	.18	.23	1022	909.9	106.8	28.2
84.50	7.06	-0.04	-0.01	7.00	.13	.19	1052	909.6	105.1	23.8
85.00	6.82	-0.04	-0.01	6.77	.14	.20	1055	909.4	103.4	19.5
85.50	6.89	-0.04	-0.01	6.84	.13	.19	1066	909.1	101.8	15.5
86.00	7.01	-0.04	-0.01	6.96	.12	.19	1077	908.9	100.2	11.7
86.50	7.19	-0.04	-0.01	7.15	.10	.17	1090	908.7	98.7	8.2
87.00	7.22	-0.03	-0.01	7.17	.09	.16	1101	908.4	97.1	4.9
87.50	7.16	-0.03	-0.01	7.12	.08	.16	1105	908.1	95.6	2.0
88.00	7.08	-0.03	-0.01	7.04	.09	.16	1107	907.9	94.2	-0.8
88.50	6.85	-0.03	-0.01	6.81	.10	.17	1107	907.6	92.7	-3.2
89.00	6.84	-0.02	-0.01	6.80	.09	.17	1111	907.3	91.3	-5.3
89.50	6.67	-0.02	-0.01	6.64	.10	.18	1109	907.1	89.9	-7.1
90.00	6.58	-0.02	-0.01	6.55	.12	.19	1104	906.8	88.6	-8.6
90.50	6.59	-0.02	-0.01	6.57	.12	.20	1105	906.5	87.3	-9.9
91.00	6.86	-0.02	-0.01	6.83	.09	.17	1119	906.2	86.1	-10.8
91.50	7.18	-0.02	-0.01	7.15	.04	.13	1137	905.9	85.0	-11.5
92.00	7.61	-0.02	-0.01	7.58	.01	.10	1149	905.6	83.9	-11.9
92.50	8.75	-0.02	0.00	8.72	-16.94	.03	1177	905.3	82.8	-12.1
93.00	8.79	-0.02	0.00	8.76	.92	.01	1188	905.0	81.8	-12.0
93.50	8.48	-0.02	0.00	8.46	.91	.00	1192	904.6	80.8	-11.7
94.00	8.86	-0.02	0.00	8.84	.87	-16.97	1206	904.3	79.9	-11.2
94.50	9.05	-0.01	0.00	9.03	.85	.95	1213	904.0	79.0	-10.5
95.00	8.31	-0.01	0.00	8.29	.89	.99	1199	903.7	78.2	-9.7
95.50	9.14	-0.01	0.00	9.13	.84	.94	1219	903.3	77.4	-8.8
96.00	8.78	-0.01	0.00	8.77	.85	.96	1213	903.0	76.5	-7.9
96.50	6.65	-0.01	0.00	6.64	.99	-17.10	1159	902.6	75.7	-6.9
97.00	6.31	-0.01	0.00	6.30	-17.03	.13	1144	902.3	74.9	-5.9
97.50	5.96	-0.01	0.00	5.96	.08	.19	1125	901.9	73.8	-6.3
98.00	5.85	-0.01	0.00	5.85	.08	.19	1124	901.6	72.8	-6.1
98.50	6.41	0.00	0.00	6.41	.03	.14	1145	901.2	71.8	-5.8
99.00	6.61	0.00	0.01	6.61	.01	.12	1152	900.8	70.9	-5.4
99.50	6.61	0.00	0.01	6.62	.02	.13	1150	900.4	69.9	-5.1
40200.00	6.84	0.00	0.01	6.84	-16.99	.11	1161	900.1	69.0	-4.7
00.50	6.95	0.00	0.01	6.96	.96	.08	1171	899.7	68.0	-4.3
01.00	7.05	0.01	0.01	7.06	.96	.08	1173	899.3	67.1	-3.9
01.50	7.36	0.01	0.01	7.38	.95	.07	1179	898.9	66.1	-3.5
02.00	7.36	0.01	0.01	7.38	.94	.06	1182	898.5	65.2	-3.1
02.50	7.70	0.01	0.01	7.72	.92	.04	1191	898.1	64.2	-2.6
03.00	6.95	0.01	0.01	6.97	.97	.09	1170	897.7	63.3	-2.2
03.50	6.51	0.01	0.02	6.53	-17.00	.12	1158	897.3	62.4	-1.7
04.00	6.21	0.00	0.02	6.23	.02	.15	1149	896.9	61.4	-1.2
04.50	6.16	0.00	0.02	6.18	.03	.15	1147	896.4	60.5	-0.7
05.00	6.16	0.00	0.02	6.18	.03	.16	1146	896.0	59.6	-0.2
05.50	6.13	0.00	0.02	6.16	.02	.15	1149	895.6	58.6	0.3
06.00	6.20	0.00	0.02	6.22	.01	.14	1155	895.2	57.7	0.8
06.50	6.35	0.00	0.02	6.38	-16.99	.12	1161	894.7	56.8	1.4
07.00	6.29	0.00	0.03	6.32	.99	.13	1159	894.3	55.8	1.9
07.50	6.34	0.00	0.03	6.37	-17.00	.13	1157	893.9	54.9	2.4
08.00	6.44	0.00	0.03	6.47	.00	.13	1157	893.4	54.0	3.0
08.50	6.98	0.00	0.03	7.02	-16.95	.09	1175	893.0	53.0	3.5
09.00	7.43	0.00	0.03	7.46	.91	.05	1191	892.5	52.1	4.1
09.50	7.62	0.00	0.03	7.65	.89	.03	1200	892.1	51.2	4.6
10.00	7.53	0.00	0.04	7.57	.89	.04	1199	891.6	50.2	5.2
10.50	7.60	0.00	0.04	7.63	.89	.04	1199	891.2	49.3	5.8
11.00	7.68	-0.01	0.04	7.71	.88	.03	1200	890.7	48.4	6.3

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40211.20	7.56	-0.01	0.04	7.59	-16.89	-17.04	1198	890.6	48.0	6.6
11.40	8.01	-0.01	0.04	8.04	.85	.00	1213	890.4	47.6	6.8
11.60	8.59	-0.01	0.04	8.62	.81	-16.97	1228	890.2	47.3	7.0
11.80	9.17	-0.01	0.04	9.20	.78	.94	1241	890.0	46.9	7.3
12.00	10.38	-0.01	0.04	10.42	.72	.88	1265	889.8	46.5	7.5
12.20	10.84	-0.01	0.04	10.87	.69	.85	1276	889.7	46.2	7.8
12.40	9.89	-0.01	0.04	9.92	.73	.89	1261	889.5	45.8	8.0
12.60	9.84	-0.01	0.04	9.87	.74	.90	1255	889.3	45.4	8.2
12.80	9.15	-0.01	0.04	9.18	.78	.94	1242	889.1	45.0	8.5
13.00	8.97	-0.01	0.04	9.00	.78	.94	1239	888.9	44.7	8.7
40213.50	8.97	-0.01	0.04	9.00	-16.78	-16.94	1239	888.5	43.7	9.3
14.00	8.79	-0.02	0.05	8.82	.78	.95	1238	888.0	42.8	9.9
14.50	8.94	-0.02	0.05	8.97	.78	.95	1238	887.6	41.9	10.6
15.00	9.53	-0.02	0.05	9.56	.75	.92	1251	887.1	41.0	11.2
15.50	10.48	-0.02	0.05	10.50	.70	.87	1272	886.7	40.0	11.9
16.00	10.02	-0.02	0.05	10.05	.72	.89	1262	886.2	39.1	12.5
16.50	9.72	-0.03	0.05	9.74	.74	.91	1251	885.8	38.2	13.2
17.00	9.71	-0.03	0.05	9.73	.75	.51	1250	885.3	37.3	13.8
17.50	9.71	-0.03	0.05	9.73	.73	.50	1255	884.9	36.4	14.5
18.00	9.68	-0.03	0.05	9.70	.73	.50	1254	884.4	35.5	15.2
18.50	9.69	-0.03	0.05	9.71	.74	.51	1252	884.0	34.5	15.9
19.00	9.89	-0.04	0.05	9.91	.73	.50	1256	883.5	33.6	16.6
19.50	9.86	-0.04	0.06	9.88	.73	.51	1253	883.1	32.7	17.3
20.00	9.67	-0.04	0.06	9.69	.74	.52	1248	882.6	31.8	18.1
20.50	9.53	-0.04	0.06	9.55	.75	.53	1244	882.2	30.9	18.8
21.00	9.36	-0.04	0.06	9.38	.76	.55	1238	881.8	30.0	19.5
21.50	9.16	-0.04	0.06	9.17	.78	.56	1232	881.3	29.1	20.3
22.00	8.87	-0.05	0.06	8.88	.79	.57	1226	880.9	28.2	21.1
22.50	8.36	-0.05	0.06	8.37	.81	.60	1215	880.5	27.3	21.8
23.00	7.97	-0.05	0.06	7.98	.84	.63	1202	880.0	26.4	22.6
23.50	7.68	-0.05	0.06	7.69	.86	.66	1192	879.6	25.5	23.4
24.00	7.62	-0.06	0.06	7.62	.87	.67	1187	879.2	24.6	24.2
24.50	7.74	-0.06	0.06	7.74	.87	.67	1187	878.8	23.7	24.9
25.00	7.86	-0.06	0.06	7.87	.86	.67	1190	878.4	22.8	25.7
25.50	7.86	-0.06	0.07	7.87	.86	.67	1189	878.0	21.9	26.5
26.00	7.89	-0.06	0.07	7.89	.85	.66	1192	877.5	21.0	27.3
26.50	7.88	-0.07	0.07	7.88	.85	.66	1192	877.1	20.1	28.1
27.00	8.02	-0.07	0.07	8.01	.84	.65	1193	876.7	19.2	28.9
27.50	8.30	-0.07	0.07	8.29	.83	.64	1199	876.3	18.4	29.7
28.00	8.34	-0.08	0.07	8.33	.82	.63	1201	876.0	17.5	30.5
28.50	9.38	-0.08	0.07	9.37	.76	.57	1225	875.6	16.6	31.2
29.00	9.94	-0.08	0.07	9.93	.72	.54	1239	875.2	15.7	32.0
29.50	9.69	-0.08	0.07	9.68	.74	.55	1232	874.8	14.8	32.7
30.00	9.59	-0.09	0.07	9.58	.74	.56	1228	874.4	13.9	33.5
30.50	9.03	-0.09	0.07	9.02	.77	.59	1214	874.1	13.0	34.2
31.00	8.32	-0.09	0.07	8.30	.82	.64	1195	873.7	12.1	34.9
31.50	8.20	-0.10	0.07	8.18	.82	.65	1190	873.3	11.2	35.5
32.00	8.09	-0.10	0.07	8.07	.84	.66	1184	873.0	10.3	36.2
32.50	7.89	-0.10	0.07	7.86	.85	.68	1176	872.6	9.4	36.7
33.00	7.69	-0.10	0.08	7.67	.86	.69	1170	872.3	8.5	37.3
33.50	7.61	-0.10	0.08	7.58	.87	.70	1166	872.0	7.6	37.8
34.00	7.57	-0.10	0.08	7.54	.88	.72	1161	871.6	6.7	38.3
34.50	7.54	-0.11	0.08	7.52	.89	.73	1156	871.3	5.7	38.7
40235.00	7.71	-0.11	0.08	7.68	-16.88	-16.72	1158	871.0	4.8	39.0
35.25	7.59	-0.11	0.08	7.56	.89	.73	1156	870.8	4.3	39.0
35.50	7.55	-0.11	0.08	7.52	.88	.72	1157	870.7	3.8	39.0
35.75	8.72	-0.11	0.08	8.69	.83	.67	1182	870.5	3.3	39.0
36.00	8.85	-0.11	0.08	8.82	.82	.66	1184	870.4	2.8	39.0

Table 2 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_2$	$\log p_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\epsilon_\pi - \delta_\odot$ (deg)
40236.25	8.82	-0.11	0.08	8.78	-16.82	-16.66	1184	870.2	2.3	39.0
36.50	8.95	-0.11	0.08	8.91	.81	.66	1186	870.1	1.8	39.0
36.75	9.24	-0.11	0.08	9.21	.81	.65	1190	869.9	1.3	39.0
37.00	8.81	-0.11	0.08	8.78	.83	.67	1181	869.8	0.8	39.0
37.25	8.63	-0.11	0.08	8.59	.84	.68	1175	869.6	0.3	39.0
37.50	8.36	-0.11	0.08	8.33	.85	.70	1168	869.5	359.8	39.0
37.75	8.59	-0.11	0.07	8.55	.84	.68	1173	869.3	359.3	39.0
38.00	9.14	-0.11	0.07	9.10	.82	.66	1184	869.2	358.8	39.0
38.25	9.61	-0.12	0.07	9.57	.79	.64	1194	869.1	358.3	39.0
38.50	9.20	-0.12	0.07	9.16	.81	.65	1186	868.9	357.8	38.9
38.75	8.38	-0.12	0.07	8.34	.85	.70	1167	868.8	357.3	38.9
39.00	7.89	-0.12	0.07	7.85	.88	.73	1155	868.7	356.8	38.9
39.25	7.81	-0.12	0.07	7.77	.89	.73	1152	868.5	356.3	38.9
39.50	8.22	-0.12	0.07	8.17	.87	.71	1160	868.4	355.8	38.9
39.75	8.95	-0.12	0.07	8.90	.83	.68	1175	868.3	355.3	38.9
40.00	7.91	-0.12	0.07	7.86	.89	.74	1150	868.2	354.8	38.8
40.25	7.67	-0.12	0.07	7.63	.90	.75	1143	868.0	354.3	38.8
40.50	7.20	-0.12	0.07	7.15	.94	.79	1129	867.9	353.8	38.8
40.75	6.81	-0.12	0.07	6.76	.97	.82	1115	867.8	353.3	38.8
41.00	6.51	-0.12	0.07	6.46	.99	.85	1105	867.7	352.8	38.7
41.25	6.45	-0.12	0.07	6.40	.99	.85	1103	867.6	352.3	38.7
41.50	6.31	-0.12	0.07	6.26	-17.01	.87	1096	867.5	351.8	38.7
41.75	6.26	-0.12	0.07	6.21	.02	.88	1092	867.4	351.3	38.6
42.00	6.05	-0.12	0.07	6.00	.03	.89	1085	867.2	350.8	38.6
42.25	6.00	-0.12	0.07	5.95	.04	.90	1082	867.1	350.3	38.5
42.50	5.87	-0.12	0.07	5.82	.05	.92	1076	867.0	349.8	38.5
42.75	5.83	-0.12	0.07	5.78	.06	.93	1072	866.9	349.3	38.4
43.00	5.79	-0.12	0.07	5.74	.07	.94	1069	866.8	348.8	38.4
43.25	5.59	-0.12	0.07	5.54	.09	.95	1061	866.7	348.3	38.3
43.50	5.08	-0.12	0.07	5.03	.13	-17.00	1042	866.6	347.8	38.2
43.75	4.97	-0.12	0.07	4.92	.14	.01	1036	866.5	347.3	38.2
44.00	5.18	-0.12	0.07	5.13	.12	.00	1043	866.5	346.8	38.1
44.25	5.72	-0.12	0.07	5.67	.08	-16.95	1062	866.4	346.3	38.0
44.50	5.95	-0.12	0.07	5.90	.07	.94	1069	866.3	345.8	37.9
44.75	6.01	-0.12	0.07	5.96	.06	.93	1071	866.2	345.3	37.9
45.00	6.08	-0.12	0.07	6.02	.06	.92	1074	866.1	344.8	37.8
45.25	6.31	-0.12	0.07	6.26	.04	.92	1079	866.0	344.3	37.7
45.50	6.70	-0.12	0.07	6.65	.02	.90	1087	865.9	343.8	37.6
45.75	7.26	-0.12	0.07	7.21	-16.99	.86	1104	865.9	343.3	37.5
46.00	8.96	-0.12	0.07	8.91	.89	.75	1146	865.8	342.8	37.4
46.25	8.56	-0.12	0.07	8.50	.91	.77	1138	865.7	342.3	37.3
46.50	7.99	-0.12	0.07	7.94	.94	.80	1125	865.7	341.8	37.2
46.75	7.03	-0.12	0.07	6.98	.99	.85	1101	865.6	341.3	37.1
47.00	7.61	-0.12	0.06	7.56	.96	.82	1116	865.5	340.8	37.0
47.25	9.72	-0.12	0.06	9.67	.85	.71	1161	865.5	340.3	36.9
47.50	8.36	-0.12	0.06	8.31	.92	.79	1130	865.4	339.8	36.7
47.75	7.33	-0.12	0.06	7.28	.99	.85	1103	865.3	339.3	36.6
48.00	7.03	-0.12	0.06	6.98	-17.00	.87	1095	865.3	338.7	36.5
48.25	6.66	-0.12	0.06	6.61	.03	.90	1082	865.2	338.2	36.4
48.50	6.44	-0.12	0.06	6.39	.05	.92	1075	865.2	337.7	36.2
48.75	6.32	-0.12	0.06	6.26	.06	.92	1072	865.1	337.2	36.1
49.00	6.27	-0.12	0.06	6.22	.06	.93	1070	865.1	336.7	36.0
49.25	6.55	-0.12	0.06	6.50	.05	.92	1075	865.0	336.2	35.8
49.50	6.35	-0.11	0.06	6.30	.07	.94	1065	865.0	335.7	35.7
49.75	6.24	-0.11	0.06	6.19	.09	.97	1058	864.9	335.2	35.5
50.00	6.21	-0.11	0.06	6.15	.09	.97	1056	864.9	334.7	35.3
50.25	6.02	-0.11	0.06	5.97	.11	.99	1049	864.8	334.2	35.2
50.50	5.51	-0.11	0.06	5.46	.15	-17.03	1030	864.8	333.6	35.0
50.75	5.49	-0.11	0.06	5.44	.15	.04	1028	864.8	333.1	34.8
51.00	5.47	-0.11	0.06	5.42	.16	.04	1026	864.7	332.6	34.7

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40251.25	5.30	-0.11	0.06	5.24	-17.17	-17.05	1020	864.7	332.1	34.5
51.50	5.29	-0.11	0.06	5.23	.17	.05	1020	864.7	331.6	34.3
51.75	5.92	-0.11	0.06	5.87	.12	.00	1041	864.6	331.1	34.1
52.00	6.00	-0.11	0.06	5.95	.13	.01	1041	864.6	330.6	33.9
52.25	5.92	-0.11	0.05	5.86	.14	.02	1035	864.6	330.1	33.8
52.50	5.36	-0.11	0.05	5.30	.18	.07	1015	864.5	329.5	33.6
52.75	6.49	-0.11	0.05	6.44	.09	-16.97	1054	864.5	329.0	33.4
53.00	6.18	-0.11	0.05	6.13	.12	.99	1044	864.5	328.5	33.2
53.25	6.11	-0.11	0.05	6.06	.13	-17.01	1039	864.5	328.0	33.0
53.50	5.57	0.00	0.05	5.62	.17	.06	1022	864.4	327.5	32.7
53.75	6.23	0.00	0.05	6.28	.12	.01	1042	864.4	327.0	32.5
54.00	6.74	-0.11	0.05	6.68	.10	-16.98	1054	864.4	326.5	32.3
54.25	7.09	-0.10	0.05	7.03	.08	.96	1062	864.4	325.9	32.1
54.50	10.03	-0.10	0.05	9.97	-16.93	.81	1126	864.4	325.4	31.9
54.75	13.85	-0.10	0.05	13.80	.78	.66	1187	864.4	324.9	31.7
55.00	17.68	-0.10	0.05	17.63	.66	.53	1238	864.3	324.4	31.4
55.25	20.54	-0.10	0.05	20.49	.59	.45	1270	864.3	323.9	31.2
55.50	12.12	-0.10	0.04	12.07	.83	.69	1168	864.3	323.4	31.0
55.75	8.80	-0.10	0.04	8.75	.97	.83	1109	864.3	322.8	30.7
56.00	8.02	-0.09	0.04	7.97	-17.01	.87	1091	864.3	322.3	30.5
56.25	9.25	-0.09	0.04	9.20	-16.96	.82	1113	864.3	321.8	30.2
56.50	8.37	-0.09	0.04	8.32	-17.01	.89	1090	864.3	321.3	30.0
56.75	8.45	-0.09	0.04	8.41	.01	.88	1091	864.3	320.8	29.7
57.00	8.05	-0.09	0.04	8.00	.03	.91	1081	864.3	320.3	29.5
57.25	7.47	-0.08	0.04	7.43	.07	.94	1066	864.3	319.7	29.2
57.50	6.65	-0.08	0.04	6.61	.12	-17.00	1042	864.3	319.2	28.9
57.75	6.71	-0.08	0.04	6.67	.13	.01	1040	864.3	318.7	28.7
58.00	7.17	-0.08	0.04	7.13	.10	-16.98	1051	864.3	318.2	28.4
58.25	8.19	-0.08	0.04	8.15	.04	.91	1078	864.3	317.7	28.1
58.50	8.40	-0.08	0.04	8.36	.03	.90	1083	864.3	317.1	27.8
58.75	6.99	-0.07	0.04	6.95	.12	-17.00	1044	864.3	316.6	27.6
59.00	6.22	-0.07	0.04	6.19	.18	.06	1019	864.3	316.1	27.3
59.25	6.01	-0.07	0.04	5.98	.19	.07	1011	864.2	315.6	27.0
59.50	6.53	-0.07	0.04	6.49	.16	.04	1025	864.2	315.1	26.7
59.75	7.52	-0.07	0.03	7.49	.10	-16.98	1052	864.2	314.5	26.4
60.00	7.35	-0.07	0.03	7.32	.11	.99	1047	864.2	314.0	26.1
60.25	7.65	-0.06	0.03	7.62	.10	.97	1054	864.2	313.5	25.8
60.50	7.75	-0.06	0.03	7.72	.10	.97	1054	864.2	313.0	25.5
60.75	7.36	-0.06	0.03	7.33	.12	-17.00	1042	864.2	312.5	25.2
61.00	6.97	-0.06	0.03	6.94	.15	.03	1031	864.2	311.9	24.9
61.25	6.50	-0.06	0.03	6.48	.18	.07	1015	864.2	311.4	24.6
61.50	6.35	-0.05	0.03	6.33	.20	.09	1008	864.2	310.9	24.3
61.75	5.88	-0.05	0.03	5.86	.24	.13	991	864.2	310.4	24.0
62.00	6.29	-0.05	0.03	6.27	.21	.10	1003	864.2	309.9	23.7
62.25	6.95	-0.05	0.03	6.93	.17	.06	1022	864.2	309.3	23.3
62.50	7.76	-0.04	0.03	7.75	.12	.01	1042	864.2	308.8	23.0
62.75	7.93	-0.04	0.03	7.92	.12	.00	1045	864.2	308.3	22.7
63.00	8.51	-0.04	0.03	8.49	.09	-16.97	1058	864.2	307.8	22.4
63.25	12.30	-0.04	0.02	12.29	-16.92	.79	1126	864.2	307.3	22.0
63.50	12.31	-0.03	0.02	12.30	.92	.79	1126	864.2	306.7	21.7
63.75	13.69	-0.03	0.02	13.68	.87	.74	1145	864.2	306.2	21.3
64.00	15.23	-0.03	0.02	15.23	.83	.69	1164	864.2	305.7	21.0
64.25	8.01	-0.03	0.02	8.00	-17.12	.99	1043	864.2	305.2	20.7
64.50	7.22	-0.02	0.02	7.22	.18	-17.07	1017	864.2	304.6	20.3
64.75	7.08	-0.02	0.02	7.08	.19	.09	1011	864.1	304.1	20.0
65.00	7.02	-0.02	0.02	7.02	.20	.09	1009	864.1	303.6	19.6
65.25	6.32	-0.01	0.02	6.33	.24	.13	989	864.1	303.1	19.2
65.50	6.19	0.00	0.02	6.21	.26	.14	983	864.1	302.5	18.9
65.75	6.22	0.01	0.02	6.25	.26	.15	982	864.1	302.0	18.5
66.00	6.22	0.02	0.01	6.25	.26	.15	981	864.1	301.5	18.1

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40266.25	5.82	0.03	0.01	5.86	-17.29	-17.18	967	864.0	301.0	17.8
66.50	5.70	0.03	0.01	5.74	.30	.19	961	864.0	300.4	17.4
66.75	5.83	0.04	0.01	5.88	.30	.19	964	864.0	299.9	17.0
67.00	5.96	0.04	0.01	6.01	.29	.18	967	864.0	299.4	16.6
67.25	6.82	0.04	0.01	6.87	.23	.12	994	863.9	298.9	16.3
67.50	6.89	0.03	0.01	6.93	.23	.11	994	863.9	298.3	15.9
67.75	6.63	0.03	0.01	6.67	.25	.14	985	863.9	297.8	15.5
68.00	6.47	0.02	0.01	6.49	.26	.15	979	863.8	297.3	15.1
68.25	6.39	0.01	0.00	6.40	.27	.16	974	863.8	296.8	14.7
68.50	6.39	0.00	0.00	6.40	.28	.17	972	863.7	296.2	14.3
68.75	6.33	0.00	0.00	6.33	.29	.18	968	863.7	295.7	13.9
69.00	6.03	0.00	0.00	6.03	.31	.21	957	863.7	295.2	13.5
69.25	5.73	0.00	0.00	5.73	.34	.24	944	863.6	294.7	13.1
69.50	5.77	0.00	0.00	5.77	.34	.24	944	863.6	294.1	12.7
69.75	5.57	0.00	0.00	5.57	.36	.26	935	863.5	293.6	12.3
70.00	5.54	0.00	-0.01	5.54	.36	.26	932	863.5	293.1	11.8
70.25	5.68	0.00	-0.01	5.67	.36	.26	936	863.4	292.5	11.4
70.50	5.83	0.00	-0.01	5.82	.35	.25	939	863.3	292.0	11.0
70.75	5.83	0.00	-0.01	5.82	.35	.26	938	863.3	291.5	10.6
71.00	5.91	0.00	-0.01	5.90	.35	.25	939	863.2	291.0	10.1
71.25	6.57	0.00	-0.01	6.56	.30	.20	960	863.1	290.4	9.7
71.50	6.84	0.00	-0.01	6.82	.29	.18	966	863.1	289.9	9.2
71.75	7.67	0.00	-0.01	7.66	.24	.13	988	863.0	289.4	8.8
72.00	7.88	0.00	-0.02	7.86	.23	.12	991	862.9	288.8	8.3
72.25	8.26	0.00	-0.02	8.24	.22	.11	998	862.8	288.3	7.9
72.50	9.29	0.00	-0.02	9.27	.17	.06	1019	862.7	287.8	7.4
72.75	9.20	0.00	-0.02	9.18	.17	.06	1016	862.7	287.2	7.0
73.00	9.05	0.00	-0.02	9.03	.18	.07	1011	862.6	286.7	6.5
73.25	9.47	0.00	-0.02	9.45	.17	.05	1018	862.5	286.2	6.0
73.50	10.47	0.00	-0.02	10.45	.12	.01	1035	862.4	285.6	5.5
73.75	8.75	0.00	-0.02	8.72	.21	.10	999	862.3	285.1	5.0
74.00	7.12	0.00	-0.02	7.09	.30	.20	957	862.2	284.5	4.6
74.25	7.43	0.00	-0.02	7.40	.29	.19	963	862.1	284.0	4.1
74.50	9.03	0.00	-0.02	9.01	.21	.10	999	861.9	283.5	3.6
74.75	10.49	0.00	-0.02	10.47	.14	.03	1026	861.8	282.9	3.1
40275.00	10.87	0.00	-0.03	10.84	-17.12	-17.01	1034	861.7	282.6	3.7
75.50	11.73	0.00	-0.03	11.70	.09	-16.98	1045	861.4	281.5	2.5
76.00	12.14	0.00	-0.03	12.12	.08	.97	1048	861.2	280.4	1.3
76.50	12.16	0.00	-0.03	12.13	.09	.98	1044	860.9	279.2	0.0
77.00	12.12	0.00	-0.03	12.10	.10	.99	1040	860.6	278.1	-1.3
77.50	11.64	0.00	-0.02	11.61	.13	-17.01	1029	860.2	277.0	-2.7
78.00	13.39	0.00	-0.02	13.37	.07	-16.96	1051	859.9	275.8	-4.1
78.50	14.49	0.00	-0.02	14.47	.04	.92	1063	859.5	274.7	-5.6
40279.00	14.53	0.00	-0.02	14.51	-17.04	-16.93	1060	859.2	273.5	-7.1
79.20	16.29	0.00	-0.02	16.27	-16.99	.88	1079	859.0	273.0	-7.8
79.40	17.03	0.00	-0.02	17.01	.97	.86	1088	858.8	272.6	-8.4
79.60	17.52	0.00	-0.02	17.50	.96	.85	1092	858.7	272.1	-9.1
79.80	18.75	0.00	-0.01	18.73	.92	.81	1105	858.5	271.6	-9.7
80.00	18.35	0.00	-0.01	18.33	.93	.81	1103	858.3	271.2	-10.4
80.20	17.94	0.00	-0.01	17.93	.95	.84	1093	858.2	270.7	-11.0
80.40	17.40	0.00	-0.01	17.39	.97	.86	1086	858.0	270.2	-11.7
80.60	16.73	0.00	-0.01	16.72	.99	.88	1078	857.8	269.7	-12.4
80.80	15.42	0.00	-0.01	15.42	-17.03	.92	1062	857.6	269.2	-13.1
81.00	14.24	0.00	-0.01	14.24	.06	.95	1048	857.4	268.8	-13.7
40281.50	13.46	0.00	0.00	13.46	-17.09	-16.99	1034	856.9	267.5	-15.5
82.00	13.41	0.00	0.00	13.42	.10	-17.00	1032	856.4	266.3	-17.3
82.50	12.89	0.00	0.01	12.89	.11	.02	1023	855.9	265.1	-19.1

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40283.00	11.23	0.00	0.01	11.24	-17.18	-17.09	996	855.3	263.8	-20.9
83.50	9.70	0.00	0.01	9.71	.24	.16	968	854.8	262.5	-22.8
84.00	8.72	0.00	0.01	8.73	.29	.21	947	854.2	261.2	-24.7
84.50	9.42	0.00	0.01	9.43	.25	.18	961	853.5	259.9	-26.6
85.00	10.04	0.00	0.01	10.05	.22	.15	972	852.9	258.6	-28.6
85.50	11.81	0.00	0.01	11.82	.15	.07	1001	852.2	257.3	-30.5
86.00	11.35	0.00	0.01	11.36	.16	.09	993	851.5	255.9	-32.5
40286.20	10.99	0.00	0.01	11.00	-17.17	-17.10	987	851.2	255.4	-33.3
86.40	12.16	0.00	0.01	12.17	.13	.06	1006	850.9	254.8	-34.1
86.60	12.46	0.00	0.01	12.47	.12	.05	1010	850.6	254.2	-34.9
86.80	12.26	0.00	0.01	12.27	.12	.05	1008	850.3	253.7	-35.7
87.00	11.95	0.00	0.01	11.95	.13	.06	1003	850.0	253.1	-36.5
87.20	11.38	0.00	0.01	11.39	.15	.08	994	849.7	252.5	-37.3
87.40	11.07	0.00	0.01	11.08	.16	.09	989	849.4	251.9	-38.1
87.60	12.02	0.00	0.01	12.02	.12	.06	1003	849.1	251.3	-38.9
87.80	12.96	0.00	0.01	12.97	.09	.02	1017	848.8	250.8	-39.7
88.00	13.79	0.00	0.01	13.80	.05	-16.99	1028	848.5	250.2	-40.5
88.20	12.51	0.00	0.01	12.51	.10	-17.03	1010	848.1	249.5	-41.3
88.40	11.85	0.00	0.00	11.85	.12	.06	1000	847.8	248.9	-42.1
88.60	11.20	0.00	0.00	11.20	.14	.08	990	847.5	248.3	-42.9
88.80	10.93	0.00	0.00	10.94	.15	.09	985	847.1	247.7	-43.8
89.00	10.67	0.00	0.00	10.67	.16	.11	981	846.8	247.1	-44.6
40289.50	10.61	0.00	0.00	10.61	-17.16	-17.10	980	845.9	245.4	-46.6
90.00	10.60	0.00	0.00	10.60	.15	.10	980	845.0	243.8	-48.6
90.50	10.71	0.00	0.00	10.70	.14	.10	981	844.1	242.0	-50.7
91.00	10.93	0.00	-0.01	10.93	.13	.08	985	843.1	240.2	-52.7
40291.20	11.20	0.00	-0.01	11.19	-17.11	-17.07	990	842.7	239.4	-53.5
91.40	11.54	0.00	-0.01	11.53	.10	.05	996	842.3	238.7	-54.3
91.60	12.27	0.00	-0.01	12.26	.06	.02	1008	841.9	237.9	-55.1
91.80	12.64	0.00	-0.01	12.63	.04	.00	1014	841.5	237.1	-55.9
92.00	14.88	0.00	-0.01	14.87	-16.96	-16.92	1045	841.1	236.3	-56.7
92.20	18.38	0.00	-0.01	18.37	.86	.82	1085	840.7	235.4	-57.5
92.40	19.28	0.00	-0.01	19.27	.83	.78	1096	840.3	234.6	-58.3
92.60	14.46	0.00	-0.02	14.45	.95	.91	1045	839.8	233.7	-59.1
92.80	10.16	0.00	-0.02	10.14	-17.11	-17.08	977	839.4	232.8	-59.9
93.00	9.47	0.00	-0.02	9.45	.15	.11	964	839.0	231.9	-60.6
40293.25	9.26	0.00	-0.02	9.24	-17.16	-17.13	959	838.4	230.7	-61.6
93.50	9.30	0.00	-0.02	9.28	.16	.13	959	837.9	229.4	-62.6
93.75	10.40	0.00	-0.02	10.38	.11	.08	980	837.3	228.1	-63.6
94.00	10.78	0.00	-0.02	10.76	.08	.06	987	836.8	226.8	-64.5
94.25	11.25	0.00	-0.02	11.23	.06	.04	996	836.2	225.3	-65.5
94.50	11.64	0.00	-0.03	11.61	.04	.02	1001	835.6	223.9	-66.4
94.75	12.10	0.00	-0.03	12.07	.02	.01	1008	835.0	222.3	-67.3
95.00	12.71	0.00	-0.03	12.68	-16.99	-16.98	1018	834.4	220.6	-68.3
95.25	14.11	-0.01	-0.03	14.06	.94	.92	1038	833.8	218.9	-69.2
95.50	15.41	-0.02	-0.03	15.35	.89	.88	1055	833.2	217.0	-70.1
95.75	16.29	-0.03	-0.03	16.22	.86	.85	1064	832.6	215.1	-71.0
96.00	17.14	-0.04	-0.04	17.07	.84	.83	1073	832.0	213.0	-71.8
96.25	18.13	-0.04	-0.04	18.05	.81	.80	1082	831.4	210.7	-72.7
96.50	20.04	-0.05	-0.04	19.94	.75	.75	1101	830.7	208.3	-73.5
96.75	19.44	-0.06	-0.04	19.34	.76	.76	1097	830.1	205.7	-74.3
97.00	20.23	-0.07	-0.04	20.13	.75	.75	1100	829.5	202.9	-75.1
97.25	22.10	-0.07	-0.04	21.98	.69	.70	1120	828.8	199.9	-75.9
97.50	22.80	-0.08	-0.05	22.67	.66	.67	1130	828.2	196.6	-76.6
97.75	22.97	-0.09	-0.05	22.84	.66	.67	1130	827.5	193.0	-77.3
98.00	23.41	-0.09	-0.05	23.26	.64	.66	1135	826.8	189.1	-78.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40298.25	23.22	-0.10	-0.05	23.07	-16.65	-16.66	1131	826.2	184.9	-78.6
98.50	24.17	-0.11	-0.05	24.01	.63	.65	1137	825.5	180.4	-79.1
98.75	25.05	-0.11	-0.05	24.88	.61	.63	1143	824.8	175.5	-79.6
99.00	26.09	-0.12	-0.05	25.92	.59	.62	1148	824.1	170.3	-80.1
99.25	26.34	-0.12	-0.06	26.16	.59	.61	1149	823.4	164.8	-80.5
99.50	28.18	-0.13	-0.06	27.99	.55	.58	1162	822.7	159.1	-80.8
99.75	29.62	-0.14	-0.06	29.42	.52	.55	1172	822.0	153.2	-81.0
40300.00	33.35	-0.14	-0.06	33.15	.45	.49	1197	821.3	147.2	-81.1
00.25	41.03	-0.15	-0.06	40.82	.34	.38	1240	820.6	141.2	-81.2
00.50	39.25	-0.15	-0.06	39.04	.36	.41	1229	819.8	135.4	-81.2
00.75	38.33	-0.16	-0.06	38.11	.38	.43	1221	819.1	129.8	-81.1
01.00	39.12	-0.16	-0.07	38.90	.36	.42	1226	818.4	124.5	-81.0
01.25	39.97	-0.16	-0.07	39.74	.35	.40	1231	817.6	119.4	-80.8
01.50	38.17	-0.17	-0.07	37.93	.36	.42	1222	816.9	114.7	-80.5
01.75	36.96	-0.17	-0.07	36.72	.38	.44	1214	816.1	110.4	-80.2
02.00	38.73	-0.18	-0.07	38.48	.36	.42	1222	815.4	106.4	-79.9
02.25	39.74	-0.18	-0.07	39.49	.33	.40	1229	814.6	102.7	-79.5
02.50	38.99	-0.18	-0.07	38.73	.35	.42	1223	813.8	99.3	-79.1
02.75	38.01	-0.19	-0.08	37.75	.35	.43	1217	813.1	96.1	-78.7
03.00	36.91	-0.19	-0.08	36.64	.36	.44	1211	812.3	93.2	-78.3
03.25	35.21	-0.19	-0.08	34.94	.39	.47	1201	811.5	90.5	-77.8
03.50	33.71	-0.20	-0.08	33.43	.40	.49	1193	810.7	88.0	-77.4
03.75	33.03	-0.20	-0.08	32.75	.40	.49	1191	809.9	85.7	-76.9
04.00	89.62	-0.20	-0.08	89.33	-15.94	.04	1389	809.2	83.6	-76.4
04.25	94.52	-0.21	-0.08	94.23	.90	-15.99	1409	808.4	81.6	-76.0
04.50	66.12	-0.21	-0.08	65.82	-16.05	-16.15	1334	807.6	79.7	-75.5
04.75	50.56	-0.21	-0.09	50.26	.18	.28	1276	806.8	77.9	-75.0
05.00	31.88	-0.22	-0.09	31.57	.40	.50	1184	805.9	76.2	-74.5
05.25	35.50	-0.22	-0.09	35.19	.35	.46	1200	805.1	74.6	-74.0
05.50	41.99	-0.22	-0.09	41.67	.27	.38	1233	804.3	73.1	-73.5
05.75	41.56	-0.23	-0.09	41.24	.27	.38	1232	803.5	71.7	-73.0
06.00	35.16	-0.23	-0.09	34.84	.34	.46	1199	802.7	70.3	-72.6
06.25	33.53	-0.23	-0.09	33.20	.36	.49	1189	801.8	69.0	-72.1
06.50	33.02	-0.23	-0.09	32.69	.37	.50	1185	801.0	67.8	-71.6
06.75	32.86	-0.24	-0.10	32.53	.37	.50	1183	800.2	66.6	-71.1
07.00	33.51	-0.24	-0.10	33.17	.36	.49	1186	799.3	65.4	-70.7
07.25	33.55	-0.24	-0.10	33.21	.35	.49	1186	798.5	64.3	-70.2
07.50	32.36	-0.24	-0.10	32.01	.36	.50	1180	797.7	63.2	-69.8
07.75	31.81	-0.24	-0.10	31.47	.37	.51	1176	796.8	62.2	-69.3
08.00	31.92	-0.25	-0.10	31.58	.37	.52	1174	796.0	61.2	-68.9
08.25	31.90	-0.25	-0.10	31.55	.37	.52	1173	795.1	60.2	-68.4
08.50	32.20	-0.25	-0.10	31.85	.35	.51	1175	794.3	59.2	-68.0
08.75	34.10	-0.25	-0.10	33.74	.32	.48	1186	793.4	58.3	-67.6
09.00	34.92	-0.25	-0.11	34.56	.31	.48	1189	792.5	57.4	-67.1
09.25	34.97	-0.26	-0.11	34.60	.31	.48	1188	791.7	56.5	-66.7
09.50	37.55	-0.26	-0.11	37.18	.27	.44	1201	790.8	55.7	-66.3
09.75	39.35	-0.26	-0.11	38.98	.24	.42	1213	789.9	54.8	-65.9
10.00	40.39	-0.26	-0.11	40.02	.22	.40	1219	789.1	54.0	-65.5
10.25	39.56	-0.27	-0.11	39.18	.23	.41	1214	788.2	53.2	-65.1
10.50	35.44	-0.27	-0.11	35.07	.27	.46	1193	787.3	52.4	-64.8
10.75	31.81	-0.27	-0.11	31.43	.32	.51	1172	786.5	51.6	-64.4
11.00	31.49	-0.27	-0.11	31.11	.32	.51	1172	785.6	50.9	-64.0
11.25	33.38	-0.27	-0.11	33.00	.28	.48	1184	784.7	50.1	-63.7
11.50	30.89	-0.27	-0.11	30.50	.32	.52	1168	783.8	49.4	-63.3
11.75	30.92	-0.27	-0.11	30.53	.32	.52	1167	783.0	48.6	-63.0
12.00	33.46	-0.28	-0.12	33.07	.28	.49	1182	782.1	47.9	-62.7
12.25	34.29	-0.28	-0.12	33.90	.26	.48	1185	781.2	47.2	-62.3
12.50	35.60	-0.28	-0.12	35.20	.24	.47	1190	780.3	46.5	-62.0
12.75	35.81	-0.28	-0.12	35.41	.24	.46	1192	779.4	45.8	-61.7
13.00	41.36	-0.28	-0.12	40.96	.16	.39	1220	778.5	45.2	-61.4

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40313.25	41.43	-0.28	-0.12	41.03	-16.16	-16.39	1219	777.7	44.5	-61.1
13.50	38.06	-0.28	-0.12	37.66	.20	.44	1201	776.8	43.8	-60.8
13.75	38.14	-0.28	-0.12	37.73	.20	.44	1201	775.9	43.2	-60.6
14.00	41.36	-0.29	-0.12	40.95	.15	.40	1217	775.0	42.5	-60.3
14.25	47.70	-0.29	-0.12	47.29	.09	.33	1244	774.1	41.9	-60.0
14.50	41.84	-0.29	-0.12	41.43	.14	.40	1217	773.2	41.3	-59.8
14.75	35.36	-0.29	-0.12	34.95	.22	.48	1184	772.3	40.6	-59.5
15.00	40.93	-0.29	-0.12	40.51	.15	.41	1211	771.4	40.0	-59.3
15.25	39.14	-0.29	-0.13	38.72	.17	.43	1203	770.5	39.4	-59.1
15.50	36.57	-0.29	-0.13	36.15	.19	.46	1189	769.7	38.8	-58.8
15.75	35.41	-0.29	-0.13	34.99	.21	.48	1182	768.8	38.2	-58.6
16.00	35.34	-0.30	-0.13	34.92	.21	.48	1181	767.9	37.6	-58.4
16.25	34.84	-0.30	-0.13	34.41	.22	.05	1172	767.0	38.0	-60.6
16.50	34.36	-0.30	-0.13	33.94	.23	.06	1168	766.1	37.4	-60.4
16.75	34.10	-0.30	-0.13	33.67	.23	.06	1165	765.2	36.8	-60.2
17.00	33.88	-0.30	-0.13	33.45	.23	.07	1163	764.3	36.2	-60.0
17.25	33.09	-0.30	-0.13	32.67	.24	.08	1159	763.4	35.5	-59.7
17.50	33.29	-0.30	-0.13	32.86	.23	.08	1158	762.6	34.9	-59.4
17.75	33.68	-0.30	-0.13	33.26	.23	.08	1159	761.7	34.3	-59.1
18.00	33.97	-0.30	-0.13	33.54	.22	.07	1161	760.8	33.6	-58.8
18.25	35.54	-0.30	-0.13	35.11	.19	.05	1170	759.9	33.0	-58.5
18.50	38.87	-0.30	-0.13	38.43	.15	.01	1185	759.0	32.3	-58.2
18.75	33.67	-0.30	-0.13	33.23	.22	.08	1157	758.1	31.7	-57.9
19.00	31.00	-0.31	-0.13	30.56	.25	.12	1142	757.2	31.1	-57.5
19.25	30.07	-0.31	-0.13	29.63	.26	.14	1136	756.4	30.4	-57.2
19.50	30.11	-0.31	-0.13	29.67	.26	.14	1134	755.5	29.8	-56.8
19.75	30.19	-0.31	-0.13	29.74	.26	.14	1133	754.6	29.1	-56.4
20.00	30.75	-0.31	-0.13	30.31	.25	.14	1136	753.7	28.5	-56.1
20.25	31.50	-0.31	-0.13	31.06	.24	.13	1139	752.9	27.8	-55.7
20.50	32.74	-0.31	-0.13	32.30	.22	.11	1146	752.0	27.2	-55.3
20.75	35.87	-0.31	-0.13	35.43	.17	.07	1161	751.1	26.6	-54.9
21.00	36.69	-0.31	-0.13	36.25	.16	.06	1165	750.2	25.9	-54.5
21.25	37.06	-0.31	-0.13	36.61	.16	.06	1165	749.4	25.3	-54.1
21.50	36.51	-0.31	-0.13	36.07	.16	.07	1161	748.5	24.6	-53.7
21.75	36.60	-0.30	-0.13	36.16	.16	.07	1161	747.6	24.0	-53.3
22.00	36.70	-0.30	-0.14	36.26	.15	.07	1161	746.8	23.4	-52.9
22.25	36.82	-0.30	-0.14	36.38	.15	.07	1161	745.9	22.8	-52.5
22.50	36.78	-0.30	-0.14	36.35	.15	.07	1161	745.0	22.1	-52.1
22.75	35.99	-0.30	-0.14	35.55	.15	.08	1157	744.2	21.5	-51.7
23.00	36.43	-0.30	-0.13	36.01	.15	.08	1157	743.3	20.9	-51.3
23.25	36.88	-0.30	-0.14	36.45	.14	.08	1157	742.5	20.3	-50.9
23.50	37.18	-0.30	-0.14	36.74	.14	.08	1158	741.6	19.7	-50.5
23.75	37.32	-0.29	-0.14	36.89	.13	.08	1159	740.8	19.1	-50.1
24.00	38.08	-0.29	-0.14	37.64	.12	.07	1164	739.9	18.4	-49.7
24.25	44.40	-0.29	-0.14	43.97	.04	.00	1192	739.1	17.8	-49.3
24.50	43.45	-0.29	-0.14	43.02	.05	.01	1187	738.2	17.2	-48.9
24.75	46.50	-0.29	-0.14	46.08	.02	-15.99	1198	737.4	16.6	-48.6
25.00	51.56	-0.29	-0.14	51.13	-15.97	.94	1217	736.5	16.0	-48.2
25.25	49.95	-0.29	-0.14	49.53	.98	.96	1211	735.7	15.4	-47.8
25.50	51.89	-0.29	-0.14	51.47	.97	.94	1216	734.9	14.8	-47.4
25.75	50.72	-0.28	-0.14	50.30	.98	.96	1211	734.0	14.2	-47.1
26.00	51.54	-0.28	-0.14	51.12	.97	.95	1213	733.2	13.7	-46.7
26.25	52.03	-0.28	-0.14	51.61	.96	.95	1214	732.4	13.1	-46.3
26.50	52.31	-0.28	-0.14	51.93	.96	.95	1214	731.5	12.5	-46.0
26.75	53.10	-0.28	-0.14	52.68	.95	.95	1216	730.7	11.9	-45.6
27.00	53.83	-0.28	-0.14	53.42	.94	.94	1217	729.9	11.3	-45.3
27.25	54.69	-0.27	-0.14	54.27	.94	.94	1219	729.1	10.7	-44.9
27.50	55.05	-0.27	-0.14	54.64	.93	.94	1219	728.3	10.2	-44.6
27.75	55.70	-0.27	-0.14	55.28	.93	.94	1220	727.4	9.6	-44.3
28.00	58.46	-0.27	-0.14	58.05	.90	.92	1228	726.6	9.0	-44.0

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40328.25	58.26	-0.26	-0.14	57.86	-15.91	-15.93	1225	725.8	8.4	-43.6
28.50	56.49	-0.26	-0.14	56.09	.92	.94	1218	725.0	7.9	-43.3
28.75	53.45	-0.26	-0.14	53.05	.95	.97	1206	724.2	7.3	-43.0
29.00	50.99	-0.26	-0.14	50.59	.97	-16.00	1195	723.4	6.7	-42.7
29.25	61.41	-0.26	-0.14	61.01	.89	-15.92	1229	722.6	6.2	-42.4
29.50	59.62	-0.26	-0.14	59.23	.90	.94	1221	721.8	5.6	-42.1
29.75	47.81	-0.26	-0.14	47.42	-16.00	-16.04	1178	721.0	5.0	-41.9
30.00	40.93	-0.25	-0.14	40.54	.08	.12	1146	720.2	4.5	-41.6
30.25	37.64	-0.25	-0.14	37.25	.11	.16	1130	719.4	3.9	-41.3
30.50	37.61	-0.25	-0.14	37.23	.12	.17	1127	718.7	3.4	-41.0
30.75	38.09	-0.25	-0.14	37.71	.11	.17	1127	717.9	2.8	-40.8
31.00	39.22	-0.25	-0.14	38.84	.10	.16	1132	717.1	2.3	-40.5
31.25	43.60	-0.24	-0.14	43.22	.05	.12	1149	716.3	1.7	-40.3
31.50	43.73	-0.24	-0.13	43.35	.05	.12	1148	715.5	1.2	-40.0
31.75	43.89	-0.24	-0.13	43.51	.05	.13	1147	714.8	0.6	-39.8
32.00	44.70	-0.24	-0.13	44.32	.04	.12	1150	714.0	0.1	-39.5
32.25	44.92	-0.24	-0.13	44.55	.03	.12	1150	713.2	359.5	-39.3
32.50	45.02	-0.24	-0.13	44.65	.04	.12	1149	712.5	359.0	-39.1
32.75	44.99	-0.24	-0.13	44.62	.04	.13	1146	711.7	358.4	-38.8
33.00	45.14	-0.23	-0.13	44.78	.04	.13	1146	711.0	357.9	-38.6
33.25	47.92	-0.23	-0.13	47.56	.01	.11	1156	710.2	357.3	-38.4
33.50	49.04	-0.23	-0.13	48.67	.00	.10	1159	709.4	356.8	-38.2
33.75	48.79	-0.23	-0.13	48.43	.00	.10	1157	708.7	356.2	-37.9
34.00	46.74	-0.23	-0.13	46.38	.02	.13	1148	707.9	355.7	-37.7
34.25	45.93	-0.23	-0.13	45.57	.03	.14	1143	707.2	355.1	-37.5
34.50	45.58	-0.23	-0.13	45.23	.03	.15	1140	706.5	354.6	-37.3
34.75	45.56	-0.22	-0.13	45.21	.03	.16	1138	705.7	354.1	-37.1
35.00	45.40	-0.22	-0.13	45.05	.04	.16	1136	705.0	353.5	-36.9
35.25	44.95	-0.22	-0.13	44.60	.04	.17	1133	704.2	353.0	-36.7
35.50	44.19	-0.22	-0.12	43.85	.05	.18	1129	703.5	352.4	-36.5
35.75	42.38	-0.22	-0.12	42.04	.07	.21	1119	702.8	351.9	-36.3
36.00	42.71	-0.22	-0.12	42.37	.07	.21	1119	702.0	351.4	-36.1
36.25	43.20	-0.21	-0.12	42.86	.06	.21	1120	701.3	350.8	-35.9
36.50	42.92	-0.21	-0.12	42.59	.06	.21	1118	700.6	350.3	-35.7
36.75	40.52	-0.21	-0.12	40.18	.09	.25	1106	699.9	349.8	-35.5
37.00	39.48	-0.21	-0.12	39.15	.10	.26	1100	699.2	349.2	-35.4
37.25	38.14	-0.21	-0.12	37.81	.12	.28	1093	698.4	348.7	-35.2
37.50	36.64	-0.21	-0.12	36.31	.14	.31	1085	697.7	348.1	-35.0
37.75	35.75	-0.21	-0.12	35.42	.15	.32	1079	697.0	347.6	-34.8
38.00	37.88	-0.20	-0.12	37.56	.13	.30	1088	696.3	347.1	-34.6
38.25	41.53	-0.20	-0.12	41.21	.09	.26	1102	695.6	346.5	-34.4
38.50	41.52	-0.20	-0.12	41.20	.09	.27	1100	694.9	346.0	-34.2
38.75	41.64	-0.20	-0.12	41.33	.09	.27	1099	694.2	345.4	-34.0
39.00	42.82	-0.20	-0.12	42.50	.08	.27	1101	693.5	344.9	-33.8
39.25	52.78	-0.20	-0.11	52.47	-15.99	.18	1136	692.8	344.4	-33.6
39.50	67.57	-0.20	-0.11	67.26	.88	.07	1179	692.1	343.8	-33.4
39.75	66.10	-0.19	-0.11	65.80	.89	.08	1174	691.4	343.3	-33.2
40.00	45.21	-0.19	-0.11	44.90	-16.06	.26	1105	690.7	342.7	-32.9
40.25	42.04	-0.19	-0.11	41.74	.09	.30	1090	690.0	342.2	-32.7
40.50	40.82	-0.19	-0.11	40.52	.11	.32	1083	689.3	341.6	-32.5
40.75	40.02	-0.19	-0.11	39.73	.12	.34	1078	688.6	341.1	-32.3
41.00	41.17	-0.19	-0.11	40.88	.11	.33	1082	687.9	340.6	-32.1
41.25	47.29	-0.18	-0.11	46.99	.05	.27	1104	687.2	340.0	-31.8
41.50	49.89	-0.18	-0.11	49.59	.02	.25	1111	686.5	339.5	-31.6
41.75	42.77	-0.18	-0.11	42.48	.09	.32	1084	685.8	338.9	-31.4
42.00	35.92	-0.18	-0.11	35.63	.17	.41	1054	685.1	338.4	-31.1
42.25	33.58	-0.18	-0.11	33.30	.21	.45	1041	684.4	337.8	-30.9
42.50	32.87	-0.18	-0.10	32.59	.22	.46	1036	683.7	337.3	-30.6
42.75	32.72	-0.17	-0.10	32.44	.23	.47	1032	683.1	336.7	-30.4
43.00	33.58	-0.17	-0.10	33.31	.22	.47	1035	682.4	336.2	-30.1

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40343.20	3.36	-0.02	-0.01	3.33	-16.22	-15.92	1034	681.8	335.7	-29.9
43.40	3.35	-0.02	-0.01	3.32	.22	.93	1033	681.3	335.3	-29.7
43.60	3.44	-0.02	-0.01	3.41	.21	.92	1036	680.7	334.8	-29.4
43.80	3.57	-0.02	-0.01	3.54	.19	.90	1042	680.2	334.4	-29.2
44.00	4.07	-0.02	-0.01	4.05	.13	.85	1063	679.6	334.0	-29.0
44.20	3.81	-0.02	-0.01	3.78	.16	.88	1050	679.1	333.5	-28.8
44.40	3.56	-0.02	-0.01	3.54	.19	.92	1038	678.5	333.1	-28.5
44.60	3.49	-0.02	-0.01	3.46	.20	.93	1034	678.0	332.6	-28.3
44.80	3.36	-0.02	-0.01	3.33	.22	.95	1027	677.4	332.2	-28.0
45.00	3.25	-0.02	-0.01	3.23	.24	.97	1021	676.9	331.7	-27.8
45.20	3.21	-0.02	-0.01	3.19	.24	.98	1017	676.3	331.3	-27.5
45.40	3.16	-0.01	-0.01	3.13	.25	.99	1014	675.8	330.8	-27.3
45.60	3.07	-0.01	-0.01	3.05	.27	-16.01	1008	675.2	330.4	-27.0
45.80	3.15	-0.01	-0.01	3.12	.26	.00	1010	674.7	329.9	-26.8
46.00	3.18	-0.01	-0.01	3.15	.25	.00	1011	674.1	329.5	-26.5
46.20	3.21	-0.01	-0.01	3.18	.25	.00	1012	673.6	329.0	-26.2
46.40	3.26	-0.01	-0.01	3.23	.24	-15.99	1013	673.0	328.6	-25.9
46.60	3.31	-0.01	-0.01	3.28	.24	.99	1014	672.5	328.1	-25.7
46.80	3.39	-0.01	-0.01	3.36	.23	.99	1017	671.9	327.7	-25.4
47.00	3.42	-0.01	-0.01	3.40	.22	.98	1018	671.3	327.2	-25.1
47.20	3.52	-0.01	-0.01	3.50	.21	.97	1022	670.8	326.8	-24.8
47.40	3.67	-0.01	-0.01	3.65	.19	.96	1028	670.2	326.3	-24.5
47.60	3.71	-0.01	-0.01	3.69	.19	.96	1028	669.7	325.9	-24.2
47.80	3.73	-0.01	-0.01	3.71	.19	.96	1027	669.1	325.4	-23.9
48.00	3.73	-0.01	-0.01	3.71	.19	.97	1026	668.5	325.0	-23.6
48.20	3.75	-0.01	-0.01	3.73	.19	.97	1026	668.0	324.5	-23.3
48.40	3.69	-0.01	-0.01	3.67	.19	.98	1022	667.4	324.0	-22.9
48.60	3.65	-0.01	-0.01	3.63	.20	.99	1018	666.9	323.6	-22.6
48.80	3.60	-0.01	-0.01	3.58	.22	-16.00	1013	666.3	323.1	-22.3
49.00	3.54	-0.01	-0.01	3.52	.23	.02	1007	665.7	322.7	-22.0
49.20	3.46	-0.01	-0.01	3.44	.24	.03	1003	665.1	322.2	-21.6
49.40	3.59	-0.01	-0.01	3.57	.23	.02	1008	664.6	321.7	-21.3
49.60	3.69	-0.01	-0.01	3.67	.22	.01	1010	664.0	321.3	-21.0
49.80	3.95	-0.01	-0.01	3.93	.19	-15.99	1019	663.4	320.8	-20.6
50.00	4.21	-0.01	-0.01	4.19	.16	.96	1029	662.8	320.4	-20.3
50.20	4.57	-0.01	-0.01	4.55	.12	.93	1040	662.3	319.9	-19.9
50.40	4.66	-0.01	-0.01	4.64	.11	.92	1043	661.7	319.4	-19.6
50.60	4.52	-0.01	-0.01	4.50	.13	.94	1038	661.1	319.0	-19.2
50.80	4.51	-0.01	-0.01	4.49	.13	.95	1035	660.5	318.5	-18.9
51.00	4.58	-0.01	-0.01	4.56	.12	.94	1037	659.9	318.0	-18.5
51.20	5.18	-0.01	-0.01	5.16	.07	.89	1055	659.3	317.6	-18.2
51.40	5.00	-0.01	-0.01	4.98	.08	.92	1048	658.8	317.1	-17.8
51.60	4.73	-0.01	0.00	4.72	.11	.94	1038	658.2	316.6	-17.5
51.80	4.69	-0.01	-0.01	4.68	.12	.96	1034	657.6	315.9	-15.6
52.00	4.82	-0.01	-0.01	4.80	.11	.95	1036	657.0	315.5	-15.2
52.20	4.28	-0.01	-0.01	4.26	.17	-16.01	1016	656.4	315.0	-14.9
52.40	4.53	-0.01	-0.01	4.52	.15	-15.99	1023	655.8	314.6	-14.6
52.60	4.29	-0.01	-0.01	4.28	.17	-16.02	1014	655.1	314.1	-14.3
52.80	4.73	-0.01	-0.01	4.71	.13	-15.98	1028	654.5	313.6	-14.0
53.00	5.26	-0.01	-0.01	5.25	.08	.94	1043	653.9	313.2	-13.7
53.20	5.25	-0.01	-0.01	5.24	.09	.94	1040	653.3	312.7	-13.4
53.40	4.81	-0.01	-0.01	4.80	.13	.99	1024	652.7	312.3	-13.2
53.60	4.95	-0.01	-0.01	4.94	.12	.98	1027	652.0	311.8	-12.9
53.80	5.73	-0.01	-0.01	5.72	.05	.97	1048	651.4	311.4	-12.7
54.00	6.73	-0.01	0.00	6.72	-15.98	.85	1074	650.8	310.9	-12.4
54.20	8.29	-0.01	0.00	8.28	.88	.76	1110	650.1	310.5	-12.2
54.40	8.72	-0.01	0.00	8.71	.86	.75	1118	649.5	310.0	-12.0
54.60	8.68	-0.01	0.00	8.67	.87	.76	1115	648.9	309.6	-11.7
54.80	8.53	0.00	0.00	8.52	.88	.77	1109	648.2	309.1	-11.5
55.00	8.47	0.00	0.00	8.46	.88	.78	1106	647.6	308.7	-11.3

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40355.20	8.68	0.00	0.00	8.67	-15.88	-15.78	1108	646.9	308.3	-11.1
55.40	8.40	0.00	0.00	8.39	.90	.80	1099	646.3	307.8	-10.9
55.60	7.46	0.00	0.00	7.46	.95	.86	1075	645.6	307.4	-10.7
55.80	6.57	0.00	0.00	6.57	-16.02	.93	1052	644.9	306.9	-10.5
56.00	11.83	0.00	0.00	11.82	-15.76	.68	1150	644.2	306.5	-10.3
56.20	17.01	0.00	0.00	17.00	.60	.52	1221	643.6	306.0	-10.1
56.40	15.63	0.00	0.00	15.62	.64	.56	1201	642.9	305.6	-10.0
56.60	14.03	0.00	0.00	14.02	.69	.62	1177	642.2	305.2	-9.8
56.80	12.08	0.00	0.00	12.08	.75	.69	1148	641.5	304.7	-9.6
57.00	11.28	0.00	0.00	11.28	.79	.73	1133	640.8	304.3	-9.4
57.20	9.82	0.00	0.00	9.82	.85	.80	1105	640.1	303.8	-9.2
57.40	7.36	0.00	0.00	7.35	.98	.93	1054	639.4	303.4	-9.0
57.60	6.75	0.00	0.00	6.74	-16.03	.98	1037	638.7	303.0	-8.9
57.80	6.55	0.00	0.00	6.54	.05	-16.01	1027	638.0	302.5	-8.7
58.00	6.57	0.00	0.00	6.56	.06	.02	1022	637.3	302.1	-8.5
58.20	6.67	0.00	0.00	6.67	.06	.02	1023	636.5	301.6	-8.3
58.40	6.66	0.00	0.00	6.65	.06	.03	1021	635.8	301.2	-8.2
58.60	6.52	0.00	0.00	6.52	.07	.04	1015	635.0	300.7	-8.0
58.80	6.41	0.00	0.00	6.40	.09	.06	1008	634.3	300.3	-7.8
59.00	6.61	0.00	0.00	6.61	.08	.06	1010	633.5	299.9	-7.6
59.20	7.69	0.00	0.00	7.69	.01	-15.99	1033	632.8	299.4	-7.5
59.40	7.20	0.00	0.00	7.20	.04	-16.03	1022	632.0	299.0	-7.3
59.60	6.98	0.00	0.00	6.97	.06	.05	1014	631.3	298.5	-7.1
59.80	6.73	0.00	0.00	6.73	.07	.07	1007	630.5	298.1	-6.9
60.00	7.45	0.00	0.00	7.45	.03	.03	1022	629.7	297.6	-6.7
60.20	7.68	0.00	0.00	7.67	.02	.02	1024	628.9	297.2	-6.6
60.40	7.06	0.00	0.00	7.06	.06	.08	1006	628.1	296.7	-6.4
60.60	7.07	0.00	0.00	7.07	.07	.08	1004	627.3	296.3	-6.2
60.80	7.72	0.00	0.00	7.71	.02	.05	1017	626.5	295.8	-6.0
61.00	7.59	0.00	0.00	7.59	.03	.06	1012	625.7	295.4	-5.8
61.20	7.48	0.00	0.00	7.48	.04	.08	1007	624.9	294.9	-5.7
61.40	7.44	0.00	0.00	7.44	.05	.08	1005	624.0	294.5	-5.5
61.60	7.66	0.00	0.00	7.66	.04	.08	1006	623.2	294.0	-5.3
61.80	7.95	0.00	0.00	7.95	.03	.08	1007	622.3	293.6	-5.1
62.00	8.31	0.00	0.00	8.31	.01	.07	1012	621.5	293.1	-4.9
62.20	8.96	0.00	0.00	8.96	-15.98	.04	1023	620.6	292.7	-4.7
62.40	9.29	0.00	0.00	9.29	.96	.03	1027	619.7	292.2	-4.5
62.60	9.37	0.00	0.00	9.37	.96	.03	1026	618.9	291.8	-4.4
62.80	9.09	0.00	0.00	9.09	.97	.05	1019	618.0	291.3	-4.2
63.00	8.39	0.00	0.00	8.38	-16.01	.09	1004	617.1	290.9	-4.0
63.20	8.22	0.00	0.00	8.22	.03	.11	998	616.2	290.4	-3.8
63.40	8.28	0.00	0.00	8.27	.03	.12	996	615.3	290.0	-3.6
63.60	8.37	0.00	0.00	8.37	.02	.12	997	614.4	289.5	-3.4
63.80	8.59	0.00	0.00	8.59	.00	.11	1000	613.4	289.1	-3.2
64.00	8.57	0.00	0.00	8.57	.01	.12	996	612.5	288.6	-3.1
64.20	8.57	0.00	0.00	8.56	.02	.13	992	611.5	288.2	-2.9
64.40	8.53	0.00	0.00	8.53	.02	.14	989	610.6	287.7	-2.7
64.60	8.54	0.00	0.00	8.54	.02	.15	988	609.6	287.3	-2.5
64.80	8.40	0.00	0.00	8.39	.03	.16	984	608.7	286.8	-2.3
65.00	8.41	0.00	0.00	8.41	.03	.17	981	607.7	286.3	-2.2
65.20	8.46	0.00	0.00	8.46	.03	.18	978	606.7	285.9	-2.0
65.40	8.68	0.00	0.00	8.68	.02	.18	980	605.7	285.4	-1.8
65.60	8.87	0.00	0.00	8.86	.01	.17	981	604.7	285.0	-1.6
65.80	9.28	0.00	0.00	9.27	.00	.16	984	603.7	284.5	-1.5
66.00	9.31	0.00	0.00	9.31	-15.99	.17	983	602.6	284.1	-1.3
66.20	9.11	0.00	0.00	9.11	-16.00	.18	978	601.6	283.6	-1.1
66.40	8.86	0.00	0.00	8.86	.02	.21	971	600.5	283.2	-1.0
66.60	8.83	0.00	0.00	8.83	.03	.23	964	599.5	282.7	-0.8
66.80	8.83	0.00	0.00	8.83	.04	.25	960	598.4	282.3	-0.7
67.00	8.79	0.00	0.00	8.79	.04	.25	959	597.3	281.8	-0.5

Table 3 (cont.)

1964 4A (Echo 2)

MJD	$-10^5 \dot{P}$	$10^5 \dot{P}_s$	$10^5 \dot{P}_t$	$-10^5 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40367.20	8.78	0.00	0.00	8.78	-16.04	-16.26	956	596.2	281.4	-0.4
67.40	8.80	0.00	0.00	8.80	.04	.27	953	595.1	280.9	-0.2
67.60	8.82	0.00	0.00	8.82	.04	.28	951	594.0	280.5	-0.1
67.80	8.83	0.00	0.00	8.83	.05	.29	947	592.9	280.0	0.1
68.00	8.83	0.00	0.00	8.82	.05	.30	944	591.8	279.6	0.2
40368.25	8.86	0.00	0.00	8.86	-16.05	-15.63	940	590.3	279.0	0.3
68.50	8.89	0.00	0.00	8.89	.06	.64	936	588.9	278.5	0.5
68.75	8.94	0.00	0.00	8.94	.05	.65	934	587.4	277.9	0.6
69.00	8.97	0.00	0.00	8.97	.05	.65	932	585.9	277.4	0.7
69.25	9.36	0.00	0.00	9.35	.03	.65	936	584.4	276.8	0.9
69.50	10.20	0.00	0.00	10.20	-15.99	.62	946	582.9	276.3	1.0
69.75	10.76	0.00	0.00	10.76	.96	.61	951	581.3	275.7	1.1
70.00	10.20	0.00	0.00	10.20	.99	.64	938	579.8	275.2	1.1
70.25	9.92	0.00	0.00	9.92	-16.02	.67	928	578.2	274.6	1.2
70.50	9.91	0.00	0.00	9.90	.02	.68	923	576.6	274.1	1.3
70.75	10.15	0.00	0.00	10.15	.01	.68	923	574.9	273.5	1.3
71.00	10.51	0.00	0.00	10.51	-15.99	.68	925	573.3	273.0	1.3
71.25	10.78	0.00	0.00	10.78	.98	.68	925	571.6	272.5	1.4
71.50	11.33	0.00	0.00	11.32	.96	.67	928	569.9	271.9	1.4
71.75	11.61	0.00	0.00	11.61	.94	.67	930	568.2	271.4	1.3
72.00	11.94	0.00	0.00	11.94	.94	.67	928	566.5	270.9	1.3
72.25	11.90	0.00	0.00	11.90	.96	.70	919	564.8	270.3	1.3
72.50	11.86	0.00	0.00	11.86	.96	.71	914	563.0	269.8	1.2
72.75	11.83	0.00	0.00	11.82	.96	.73	909	561.2	269.3	1.1
73.00	11.83	0.00	0.00	11.83	.96	.74	906	559.4	268.8	1.1
73.25	11.72	0.00	0.00	11.71	.97	.76	899	557.5	268.3	0.9
73.50	11.54	0.00	0.00	11.53	.99	.79	888	555.7	267.7	0.8
73.75	11.53	0.00	0.00	11.52	-16.00	.81	883	553.8	267.2	0.7
74.00	11.64	0.00	0.00	11.64	-15.99	.82	880	551.9	266.7	0.5
74.25	11.97	0.00	0.00	11.96	.99	.83	878	550.0	266.2	0.3
74.50	12.52	0.00	0.00	12.52	.96	.82	881	548.0	265.7	0.1
74.75	13.20	0.00	0.00	13.20	.94	.82	883	546.0	265.2	-0.1
75.00	14.04	0.00	0.00	14.03	.92	.81	886	544.0	264.7	-0.3
75.25	15.11	0.00	0.00	15.10	.89	.79	891	542.0	264.2	-0.6
75.50	16.36	0.00	0.00	16.36	.86	.78	894	539.9	263.7	-0.9
75.75	17.88	0.00	0.00	17.88	.83	.77	900	537.8	263.2	-1.2
76.00	19.68	0.00	0.00	19.68	.79	.74	909	535.7	262.7	-1.5
76.25	21.79	0.00	0.00	21.78	.75	.72	917	533.6	262.2	-1.8
76.50	24.17	0.00	0.00	24.16	.71	.70	923	531.5	261.7	-2.2
76.75	26.92	0.00	0.00	26.92	.68	.69	929	529.3	261.2	-2.5
77.00	29.98	0.00	0.00	29.98	.66	.68	933	527.1	260.7	-2.9
77.25	33.45	0.00	0.00	33.44	.63	.67	937	524.8	260.3	-3.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38725.00	7.12	7.53	1.11	15.76	-16.79	-16.67	703	601.8	316.2	43.4
25.50	7.94	7.52	1.12	16.57	.77	.63	710	603.2	315.1	44.5
26.00	8.34	7.53	1.12	16.99	.76	.62	713	604.5	314.0	45.7
26.50	8.23	7.62	1.13	16.98	.77	.63	714	605.9	312.9	46.8
27.00	7.73	7.70	1.14	16.58	.79	.64	710	607.2	311.8	48.0
27.50	7.26	7.73	1.14	16.12	.80	.54	706	608.5	310.7	49.1
28.00	7.40	7.76	1.15	16.31	.80	.64	708	609.7	309.6	50.2
28.50	5.80	7.78	1.15	14.73	.85	.69	695	611.0	308.4	51.4
38728.75	5.34	7.80	1.15	14.29	-16.86	-16.71	693	611.6	307.9	52.0
29.00	3.62	7.81	1.16	12.59	.92	.76	669	612.2	307.3	52.5
29.25	4.51	7.82	1.16	13.49	.89	.71	679	612.7	306.8	53.1
29.50	6.88	7.81	1.16	15.85	.82	.63	704	613.3	306.2	53.7
29.75	6.75	7.80	1.16	15.71	.83	.65	703	613.9	305.6	54.2
30.00	6.84	7.78	1.16	15.78	.82	.65	706	614.5	305.1	54.8
30.25	6.63	7.78	1.16	15.57	.83	.65	702	615.0	304.5	55.4
38730.50	6.25	7.78	1.16	15.19	-16.85	-16.66	698	615.6	303.9	55.9
31.00	5.96	7.76	1.16	14.88	.85	.67	695	616.7	302.8	57.1
31.50	5.66	7.73	1.16	14.54	.86	.68	695	617.7	301.6	58.2
32.00	5.52	7.72	1.15	14.38	.87	.69	694	618.7	300.5	59.3
32.50	5.31	7.65	1.15	14.11	.88	.69	690	619.7	299.3	60.4
33.00	5.82	7.60	1.14	14.56	.87	.67	695	620.7	298.1	61.6
33.50	6.27	7.52	1.13	14.92	.86	.66	700	621.6	296.9	62.7
34.00	6.21	7.43	1.12	14.77	.86	.66	699	622.5	295.7	63.8
34.50	5.79	7.36	1.11	14.26	.87	.68	695	623.4	294.5	64.9
35.00	5.40	7.28	1.09	13.76	.88	.69	692	624.2	293.3	66.0
35.50	5.03	7.18	1.07	13.28	.90	.71	686	625.0	292.1	67.2
36.00	5.70	7.07	1.06	13.83	.88	.68	691	625.8	290.9	68.3
36.50	6.63	6.76	1.04	14.63	.87	.65	697	626.6	289.6	69.4
37.00	7.21	6.84	1.02	15.07	.86	.63	701	627.3	288.4	70.5
37.50	7.57	6.71	1.00	15.29	.85	.62	705	627.9	287.1	71.6
38.00	7.07	6.59	0.98	14.64	.86	.65	703	628.6	285.8	72.7
38.50	7.21	6.47	0.96	14.64	.85	.64	703	629.2	284.5	73.8
39.00	8.04	6.35	0.94	15.33	.84	.62	711	629.8	283.1	74.9
39.50	7.81	6.17	0.92	14.90	.84	.63	708	630.3	281.8	76.0
40.00	7.91	6.06	0.90	14.86	.84	.63	711	630.9	280.4	77.0
40.50	7.96	5.93	0.88	14.77	.84	.63	710	631.4	279.0	78.1
41.00	7.97	5.74	0.85	14.56	.85	.64	707	631.8	277.6	79.2
41.50	8.27	5.63	0.82	14.71	.84	.63	710	632.2	276.1	80.3
42.00	8.13	5.43	0.80	14.35	.85	.64	706	632.6	274.6	81.3
38742.25	8.33	5.32	0.78	14.43	-16.85	-16.63	707	632.8	273.9	81.9
42.50	7.86	5.22	0.77	13.85	.86	.65	699	633.0	273.1	82.4
42.75	9.16	5.14	0.75	15.04	.83	.60	711	633.2	272.3	82.9
43.00	10.77	5.03	0.74	16.54	.80	.55	725	633.3	271.6	83.5
43.25	10.50	4.93	0.73	16.16	.80	.57	723	633.5	270.8	84.0
43.50	10.45	4.82	0.71	15.98	.80	.57	722	633.6	270.0	84.5
43.75	10.39	4.72	0.70	15.81	.81	.58	721	633.8	269.1	85.1
44.00	10.54	4.61	0.68	15.83	.81	.57	721	633.9	268.3	85.6
44.25	10.48	4.51	0.67	15.66	.82	.57	717	634.0	267.5	86.1
44.50	10.32	4.41	0.66	15.38	.82	.58	715	634.1	266.6	86.6
44.75	10.36	4.31	0.64	15.31	.82	.59	717	634.2	265.7	87.2
45.00	10.40	4.21	0.63	15.23	.81	.59	719	634.3	264.9	87.7
45.25	10.64	4.10	0.61	15.35	.81	.58	719	634.4	264.0	88.2
38745.40	10.80	4.05	0.60	15.45	-16.82	-16.57	717	634.5	263.4	88.5
45.50	10.86	4.00	0.60	15.46	.81	.57	718	634.5	263.0	88.7
45.60	10.91	3.96	0.59	15.46	.81	.57	718	634.5	262.7	88.9
45.70	18.13	3.91	0.59	22.64	.65	.40	781	634.5	262.3	89.1

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_c$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38745.80	9.71	3.87	0.58	14.16	-16.86	-16.59	698	634.6	261.9	89.3
45.90	11.06	3.84	0.57	15.48	.82	.56	715	634.6	261.5	89.5
46.00	7.85	3.78	0.56	12.19	.92	.67	674	634.6	261.1	89.7
46.10	6.60	3.75	0.56	10.91	.96	.72	652	634.7	260.8	89.9
46.20	15.12	3.70	0.55	19.36	.72	.47	756	634.7	260.4	90.1
46.30	15.16	3.64	0.54	19.35	.72	.45	754	634.7	260.0	90.3
46.40	13.90	3.61	0.54	18.05	.75	.48	742	634.7	259.6	90.5
38746.50	13.03	3.57	0.53	17.13	-16.77	-16.51	734	634.7	259.2	90.7
46.75	12.92	3.47	0.52	16.91	.77	.53	734	634.8	258.1	91.3
47.00	12.60	3.35	0.50	16.45	.78	.54	731	634.8	257.1	91.8
47.25	12.58	3.25	0.48	16.31	.78	.54	729	634.8	256.0	92.3
47.50	12.35	3.13	0.47	15.95	.79	.55	727	634.9	254.9	92.8
47.75	12.11	3.02	0.45	15.58	.80	.57	726	634.9	253.8	93.2
48.00	11.77	2.91	0.44	15.12	.81	.58	721	634.9	252.6	93.7
48.25	11.94	2.79	0.42	15.14	.81	.58	720	634.9	251.4	94.2
48.50	11.89	2.66	0.41	14.96	.81	.58	717	634.9	250.2	94.7
48.75	12.46	2.55	0.39	15.40	.80	.56	722	634.8	248.9	95.2
49.00	13.56	2.41	0.37	16.34	.78	.53	731	634.8	247.6	95.7
49.25	13.60	2.30	0.36	16.26	.77	.54	733	634.8	246.3	96.1
49.50	13.44	2.18	0.34	15.96	.78	.56	734	634.7	244.8	96.6
49.75	13.16	2.06	0.32	15.54	.79	.57	728	634.7	243.4	97.1
38750.00	13.17	1.91	0.31	15.39	-16.79	-16.57	726	634.6	241.9	97.5
50.50	13.12	1.66	0.28	15.06	.80	.57	722	634.5	238.7	98.4
51.00	12.84	1.42	0.24	14.50	.82	.59	716	634.3	235.2	99.3
51.50	12.85	1.16	0.21	14.22	.82	.60	715	634.2	231.3	100.1
52.00	12.84	0.91	0.17	13.92	.83	.61	711	633.9	227.1	100.9
52.50	12.90	0.65	0.14	13.69	.84	.62	707	633.7	222.5	101.7
53.00	13.12	0.40	0.11	13.63	.83	.62	708	633.4	217.4	102.4
53.50	13.21	0.13	0.07	13.41	.84	.63	707	633.1	211.8	103.0
54.00	13.10	-0.13	0.04	13.02	.85	.64	701	632.8	205.6	103.6
54.50	12.89	-0.39	0.00	12.51	.87	.66	693	632.4	198.8	104.0
55.00	12.85	-0.65	-0.03	12.17	.88	.66	685	632.0	191.5	104.4
55.50	13.52	-0.91	-0.06	12.56	.87	.65	693	631.6	183.7	104.6
56.00	13.74	-1.16	-0.10	12.48	.86	.66	695	631.2	175.7	104.7
56.50	13.72	-1.41	-0.14	12.17	.87	.67	692	630.7	167.5	104.6
57.00	13.87	-1.68	-0.17	12.02	.88	.68	689	630.2	159.6	104.5
57.50	14.15	-1.91	-0.20	12.04	.88	.68	690	629.7	151.9	104.2
58.00	14.35	-2.15	-0.24	11.96	.88	.68	688	629.2	144.7	103.7
58.50	14.60	-2.40	-0.27	11.93	.88	.67	685	628.6	138.1	103.2
59.00	14.96	-2.66	-0.31	11.98	.88	.67	688	628.1	132.1	102.6
59.50	15.35	-2.92	-0.34	12.08	.87	.67	692	627.4	126.6	101.9
60.00	15.56	-3.17	-0.37	12.02	.87	.68	692	626.8	121.6	101.2
60.50	15.48	-3.43	-0.40	11.64	.88	.69	686	626.2	117.1	100.3
61.00	16.00	-3.67	-0.43	11.90	.87	.68	691	625.5	113.1	99.5
61.50	16.49	-3.94	-0.47	12.09	.87	.67	694	624.8	109.3	98.6
62.00	17.02	-4.19	-0.50	12.34	.86	.66	696	624.1	105.9	97.7
62.50	17.86	-4.44	-0.53	12.90	.84	.63	703	623.4	102.8	96.7
63.00	18.94	-4.69	-0.56	13.69	.82	.60	714	622.6	99.9	95.8
63.50	19.38	-4.94	-0.59	13.85	.81	.60	716	621.9	97.2	94.8
64.00	19.62	-5.20	-0.63	13.79	.81	.61	717	621.1	94.6	93.8
64.50	19.68	-5.41	-0.65	13.62	.81	.62	716	620.3	92.3	92.8
38765.00	20.28	-5.67	-0.68	13.93	-16.81	-16.61	718	619.5	90.0	91.7
65.25	20.40	-5.78	-0.70	13.91	.81	.61	718	619.1	88.9	91.2
65.50	20.19	-5.92	-0.72	13.55	.82	.63	715	618.7	87.9	90.7
65.75	20.28	-6.02	-0.73	13.53	.82	.63	715	618.2	86.8	90.2
66.00	20.47	-6.14	-0.74	13.59	.81	.63	715	617.8	85.8	89.6
66.25	20.75	-6.24	-0.75	13.75	.81	.63	718	617.4	84.8	89.1

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38766.50	20.60	-6.35	-0.76	13.49	-16.82	-16.64	715	617.0	83.9	88.6
66.75	20.75	-6.46	-0.78	13.51	.81	.64	715	616.5	82.9	88.1
67.00	21.00	-6.55	-0.79	13.67	.81	.63	718	616.1	82.0	87.5
67.25	21.14	-6.63	-0.80	13.71	.81	.63	718	615.7	81.1	87.0
67.50	21.37	-6.69	-0.81	13.86	.80	.63	720	615.2	80.2	86.4
67.75	21.59	-6.79	-0.83	13.97	.80	.62	721	614.8	79.3	85.9
68.00	23.15	-6.87	-0.84	15.45	.75	.57	737	614.3	78.5	85.4
68.25	26.90	-6.94	-0.85	19.11	.66	.47	770	613.9	77.6	84.8
68.50	25.54	-6.99	-0.86	17.68	.69	.50	759	613.4	76.8	84.3
68.75	25.21	-7.09	-0.88	17.24	.70	.52	755	613.0	76.0	83.7
69.00	25.60	-7.16	-0.89	17.55	.69	.51	758	612.5	75.2	83.2
69.25	26.92	-7.23	-0.90	18.79	.66	.49	768	612.1	74.4	82.6
69.50	26.68	-7.31	-0.91	18.46	.67	.50	766	611.6	73.6	82.1
69.75	25.90	-7.38	-0.93	17.59	.69	.52	759	611.2	72.8	81.5
70.00	24.92	-7.45	-0.94	16.52	.71	.55	750	610.7	72.1	81.0
70.25	24.55	-7.53	-0.94	16.08	.73	.56	746	610.3	71.3	80.4
70.50	24.18	-7.61	-0.95	15.62	.74	.58	742	609.8	70.6	79.9
70.75	24.33	-7.66	-0.96	15.70	.73	.58	743	609.3	69.8	79.3
71.00	24.68	-7.74	-0.97	15.97	.72	.56	745	608.9	69.1	78.8
71.25	24.82	-7.82	-0.98	16.02	.72	.56	746	608.4	69.4	78.2
71.50	25.06	-7.87	-0.99	16.20	.72	.57	748	607.9	67.7	77.7
71.75	25.40	-7.93	-1.00	16.46	.71	.57	751	607.5	67.0	77.1
72.00	25.74	-8.00	-1.01	16.73	.70	.56	754	607.0	66.2	76.5
72.25	26.18	-8.05	-1.02	17.11	.69	.55	757	606.5	65.6	76.0
72.50	26.52	-8.11	-1.03	17.37	.68	.53	759	606.1	64.9	75.4
72.75	26.95	-8.17	-1.00	17.78	.66	.51	764	605.6	64.2	74.9
73.00	27.70	-8.23	-1.05	18.43	.64	.49	770	605.1	63.5	74.3
73.25	29.81	-8.28	-1.06	20.47	.59	.44	786	604.7	62.8	73.7
73.50	29.93	-8.32	-1.06	20.55	.59	.44	786	604.2	62.2	73.2
73.75	29.64	-8.36	-1.07	20.21	.60	.46	783	603.7	61.5	72.6
74.00	28.93	-8.40	-1.08	19.45	.62	.48	777	603.3	60.9	72.0
74.25	28.85	-8.46	-1.08	19.32	.62	.49	776	602.8	60.2	71.5
74.50	28.77	-8.49	-1.08	19.20	.62	.49	775	602.3	59.6	70.9
74.75	28.90	-8.53	-1.09	19.28	.62	.49	776	601.9	58.9	70.3
75.00	28.83	-8.55	-1.09	19.19	.62	.50	775	601.4	58.3	69.8
75.25	27.81	-8.57	-1.10	18.14	.65	.52	767	600.9	57.6	69.2
75.50	27.54	-8.59	-1.10	17.84	.65	.53	765	600.5	57.0	68.6
75.75	27.05	-8.61	-1.10	17.34	.66	.54	762	600.0	56.4	68.1
76.00	27.09	-8.62	-1.11	17.36	.66	.54	762	599.6	55.8	67.5
76.25	26.51	-8.67	-1.11	16.74	.68	.56	756	599.1	55.1	66.9
76.50	26.25	-8.68	-1.12	16.45	.68	.58	754	598.6	54.5	66.3
76.75	26.20	-8.71	-1.12	16.37	.68	.58	754	598.2	53.9	65.8
77.00	26.36	-8.74	-1.12	16.50	.68	.57	755	597.7	53.3	65.2
77.25	27.26	-8.75	-1.12	17.39	.65	.55	762	597.3	52.7	64.6
77.50	28.37	-8.75	-1.12	18.50	.62	.52	771	596.8	52.1	64.0
77.75	32.51	-8.76	-1.12	22.63	.53	.42	800	596.4	51.5	63.5
78.00	31.34	-8.77	-1.12	21.45	.54	.44	795	596.0	50.9	62.9
78.25	30.49	-8.76	-1.13	20.60	.56	.47	788	595.5	50.3	62.3
78.50	30.38	-8.75	-1.13	20.50	.57	.47	786	595.1	49.7	61.7
78.75	30.38	-8.72	-1.13	20.53	.57	.48	785	594.7	49.1	61.2
79.00	29.87	-8.71	-1.13	20.03	.58	.49	782	594.2	48.5	60.6
79.25	28.95	-8.69	-1.13	19.13	.59	.51	777	593.8	47.9	60.0
79.50	28.46	-8.68	-1.14	18.64	.60	.52	773	593.4	47.3	59.4
79.75	27.89	-8.65	-1.14	18.10	.62	.54	768	592.9	46.8	58.8
80.00	28.11	-8.64	-1.14	18.32	.61	.53	770	592.5	46.2	58.3
80.25	28.39	-8.63	-1.14	18.61	.60	.52	773	592.1	45.6	57.7
80.50	28.83	-8.62	-1.14	19.07	.59	.52	775	591.7	45.0	57.1
80.75	30.07	-8.61	-1.14	20.32	.57	.49	783	591.3	44.4	56.5
81.00	32.74	-8.59	-1.14	23.01	.50	.43	802	590.9	43.8	55.9
81.25	35.78	-8.57	-1.14	26.07	.43	.36	822	590.5	43.3	55.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_c$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38781.50	36.30	-8.56	-1.14	26.60	-16.42	-16.36	823	590.1	42.7	54.8
81.75	37.93	-8.54	-1.14	28.25	.41	.35	827	589.7	42.2	54.2
82.00	39.23	-8.50	-1.13	29.60	.39	.33	832	589.3	41.6	53.6
82.25	41.54	-8.46	-1.13	31.95	.34	.28	845	588.9	41.0	53.0
82.50	44.14	-8.43	-1.12	34.59	.29	.24	859	588.6	40.5	52.4
82.75	41.30	-8.37	-1.12	31.81	.33	.27	848	588.2	39.9	51.8
83.00	40.33	-8.34	-1.12	30.87	.35	.30	841	587.8	39.4	51.3
83.25	39.44	-8.33	-1.11	30.00	.36	.31	837	587.5	38.8	50.7
83.50	38.01	-8.24	-1.10	28.68	.38	.33	831	587.1	38.2	50.1
83.75	36.99	-8.17	-1.10	27.72	.40	.35	825	586.8	37.7	49.5
84.00	35.86	-8.13	-1.09	26.64	.42	.38	819	586.4	37.1	48.9
84.25	34.51	-8.07	-1.09	25.35	.44	.40	813	586.1	36.6	48.3
84.50	32.74	-8.02	-1.08	23.64	.48	.44	802	585.7	36.0	47.7
84.75	30.87	-7.97	-1.07	21.83	.51	.48	791	585.4	35.5	47.1
85.00	29.82	-7.89	-1.06	20.87	.53	.50	786	585.1	34.9	46.5
85.25	28.78	-7.84	-1.06	19.88	.55	.52	781	584.8	34.4	46.0
85.50	28.57	-7.79	-1.05	19.73	.55	.52	780	584.4	33.8	45.4
85.75	29.10	-7.69	-1.04	20.36	.54	.51	783	584.1	33.3	44.8
86.00	29.63	-7.63	-1.03	20.97	.52	.50	786	583.8	32.8	44.2
86.25	29.97	-7.56	-1.03	21.38	.51	.49	789	583.5	32.2	43.6
86.50	30.52	-7.51	-1.02	21.99	.50	.48	793	583.2	31.7	43.0
86.75	31.61	-7.42	-1.01	23.18	.47	.45	800	583.0	31.1	42.4
87.00	32.51	-7.35	-1.00	24.16	.46	.44	804	582.7	30.6	41.8
87.25	33.22	-7.28	-0.99	24.95	.44	.42	808	582.4	30.1	41.2
87.50	33.64	-7.21	-0.98	25.44	.42	.41	812	582.1	29.5	40.6
87.75	33.66	-7.14	-0.97	25.55	.42	.41	812	581.9	29.0	40.0
88.00	34.44	-7.08	-0.96	26.40	.40	.39	816	581.6	28.5	39.4
88.25	34.72	-6.99	-0.95	26.78	.40	.39	818	581.4	27.9	38.8
88.50	34.93	-6.93	-0.94	27.06	.39	.39	819	581.1	27.4	38.2
88.75	35.29	-6.95	-0.93	27.41	.39	.38	819	580.9	26.8	37.6
89.00	39.77	-6.79	-0.92	32.07	.32	.31	839	580.7	26.3	37.0
89.25	40.09	-6.71	-0.91	32.47	.31	.30	841	580.5	25.8	36.4
89.50	36.75	-6.64	-0.90	29.21	.36	.36	827	580.3	25.3	35.8
89.75	36.20	-6.56	-0.89	28.76	.37	.37	824	580.0	24.7	35.3
90.00	35.53	-6.47	-0.88	28.18	.37	.38	822	579.8	24.2	34.7
90.25	35.46	-6.40	-0.88	28.18	.37	.37	823	579.7	23.7	34.1
90.50	36.60	-6.32	-0.87	29.41	.35	.35	828	579.5	23.1	33.5
90.75	35.73	-6.24	-0.86	28.62	.37	.37	823	579.3	22.6	32.9
91.00	35.44	-6.14	-0.85	28.45	.37	.38	821	579.1	22.1	32.3
91.25	35.32	-6.04	-0.83	28.45	.37	.38	821	579.0	21.6	31.7
91.50	35.47	-5.95	-0.82	28.70	.37	.37	822	578.8	21.0	31.1
91.75	35.35	-5.86	-0.81	28.68	.37	.38	821	578.7	20.5	30.5
92.00	35.28	-5.75	-0.80	28.73	.36	.37	823	578.5	20.0	29.9
92.25	35.88	-5.32	-0.78	29.78	.34	.35	829	578.4	19.5	29.3
92.50	36.73	-5.54	-0.77	30.41	.33	.34	831	578.3	18.9	28.7
92.75	36.78	-5.44	-0.75	30.59	.34	.35	829	578.2	18.4	28.1
93.00	35.71	-5.32	-0.74	29.65	.36	.37	824	578.0	17.9	27.5
93.25	33.63	-5.23	-0.73	27.67	.38	.40	816	577.9	17.4	26.9
93.50	32.72	-5.09	-0.71	26.91	.39	.41	813	577.8	16.9	26.3
93.75	33.07	-4.98	-0.70	27.39	.39	.41	814	577.8	16.3	25.6
94.00	32.81	-4.87	-0.68	27.27	.39	.41	814	577.7	15.8	25.0
94.25	32.87	-4.75	-0.67	27.45	.38	.40	815	577.6	15.3	24.4
94.50	34.40	-4.64	-0.65	29.11	.36	.37	822	577.5	14.8	23.8
94.75	34.57	-4.51	-0.64	29.42	.35	.37	823	577.5	14.3	23.2
95.00	37.02	-4.38	-0.62	32.02	.32	.33	834	577.4	13.7	22.6
95.25	41.65	-4.28	-0.60	36.77	.25	.26	853	577.4	13.2	22.0
95.50	47.10	-4.16	-0.59	42.35	.18	.20	871	577.4	12.7	21.4
95.75	46.39	-4.03	-0.57	41.79	.19	.21	869	577.3	12.2	20.8
96.00	42.13	-3.93	-0.56	37.65	.24	.25	855	577.3	11.7	20.2
96.25	38.26	-3.79	-0.54	33.93	.29	.30	842	577.3	11.2	19.6

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38796.50	37.07	-3.67	-0.52	32.87	-16.31	-16.32	836	577.3	10.6	19.0
96.75	35.84	-3.56	-0.50	31.78	.32	.34	832	577.3	10.1	18.4
97.00	33.53	-3.42	-0.49	29.62	.35	.37	824	577.3	9.6	17.8
97.25	34.19	-3.31	-0.47	30.41	.34	.35	828	577.4	9.1	17.2
97.50	34.71	-3.18	-0.45	31.07	.33	.35	829	577.4	8.6	16.6
97.75	32.99	-3.06	-0.43	29.50	.35	.36	824	577.4	8.1	16.0
38797.90	33.52	-2.99	-0.42	30.11	-16.32	-16.34	831	577.5	7.8	15.6
98.00	30.18	-2.93	-0.42	26.82	.37	.38	818	577.5	7.6	15.4
98.10	43.06	-2.90	-0.41	39.75	.20	.22	865	577.5	7.3	15.2
98.20	46.84	-2.84	-0.40	43.60	.17	.18	875	577.5	7.1	14.9
98.30	51.26	-2.81	-0.39	48.06	.12	.14	889	577.5	6.9	14.7
98.40	90.09	-2.74	-0.39	86.97	-15.85	-15.87	976	577.6	6.7	14.4
98.50	91.23	-2.71	-0.38	88.14	.84	.86	979	577.6	6.5	14.2
98.60	63.78	-2.66	-0.37	60.75	-16.00	-16.02	924	577.6	6.3	14.0
98.70	53.86	-2.61	-0.37	50.88	.09	.11	898	577.6	6.1	13.7
98.80	51.72	-2.56	-0.36	48.80	.11	.13	892	577.7	5.9	13.5
98.90	57.37	-2.51	-0.35	54.51	.06	.07	907	577.7	5.7	13.2
99.00	56.31	-2.45	-0.34	53.72	.07	.08	905	577.7	5.5	13.0
99.10	54.99	-2.40	-0.34	52.25	.09	.10	900	577.8	5.3	12.8
99.20	45.02	-2.37	-0.33	42.32	.18	.20	871	577.8	5.1	12.5
38799.50	42.14	-2.21	-0.31	39.61	-16.22	-16.24	860	577.9	4.5	11.8
99.75	37.71	-2.09	-0.30	35.33	.27	.29	846	578.0	4.0	11.2
38800.00	34.49	-1.97	-0.28	32.23	.30	.31	839	578.1	3.4	10.6
00.25	37.03	-1.84	-0.26	34.94	.26	.27	849	578.2	2.9	10.0
00.50	34.55	-1.72	-0.25	32.58	.30	.31	838	578.4	2.4	9.4
00.75	30.79	-1.61	-0.23	28.95	.35	.36	824	578.5	1.9	8.8
01.00	31.87	-1.47	-0.21	30.19	.33	.34	830	578.6	1.4	8.1
01.25	34.07	-1.36	-0.19	32.52	.30	.31	838	578.8	0.9	7.5
01.50	34.38	-1.24	-0.18	32.96	.29	.30	841	578.9	0.4	6.9
01.75	32.17	-1.13	-0.16	30.89	.32	.33	833	579.1	359.9	6.3
02.00	29.43	-0.99	-0.14	28.30	.37	.37	822	579.3	359.3	5.7
02.25	25.75	-0.87	-0.12	24.76	.43	.43	806	579.4	358.8	5.1
02.50	25.80	-0.74	-0.11	24.95	.42	.42	808	579.6	358.3	4.5
02.75	25.95	-0.63	-0.09	25.24	.42	.42	808	579.8	357.8	3.9
03.00	25.07	-0.51	-0.07	24.49	.44	.44	804	580.0	357.3	3.3
03.25	24.51	-0.37	-0.05	24.09	.44	.44	803	580.2	356.8	2.7
03.50	22.60	-0.24	-0.04	22.32	.48	.48	793	580.4	356.3	2.1
03.75	21.13	-0.13	-0.02	20.99	.52	.51	785	580.6	355.8	1.5
04.00	20.00	0.00	0.00	20.00	.55	.54	778	580.9	355.2	0.8
04.25	19.41	0.11	0.02	19.54	.56	.55	775	581.1	354.7	0.2
04.50	18.64	0.23	0.04	18.90	.57	.56	772	581.3	354.2	-0.4
04.75	20.50	0.37	0.05	20.91	.53	.51	784	581.6	353.7	-1.0
05.00	21.77	0.50	0.07	22.34	.49	.48	792	581.8	353.2	-1.6
05.25	22.37	0.62	0.09	23.07	.48	.46	797	582.1	352.7	-2.2
05.50	22.80	0.73	0.11	23.64	.46	.44	802	582.4	352.2	-2.8
05.75	22.35	0.85	0.13	23.32	.46	.45	801	582.6	351.6	-3.4
06.00	21.85	0.97	0.14	22.96	.48	.46	798	582.9	351.1	-4.1
06.25	21.31	1.11	0.16	22.58	.49	.46	796	583.2	350.6	-4.7
06.50	20.31	1.22	0.18	21.72	.51	.48	791	583.5	350.1	-5.3
06.75	20.32	1.37	0.19	21.88	.50	.48	793	583.8	349.6	-5.9
07.00	22.80	1.47	0.21	24.48	.45	.42	807	584.1	349.1	-6.5
07.25	25.14	1.60	0.23	26.97	.41	.38	817	584.4	348.5	-7.1
07.50	21.65	1.72	0.25	23.62	.48	.44	801	584.7	348.0	-7.7
07.75	17.62	1.85	0.26	19.73	.56	.53	780	585.1	347.5	-8.4
08.00	15.86	1.95	0.27	18.08	.60	.57	770	585.4	347.0	-9.0
08.25	15.45	2.08	0.29	17.82	.61	.57	768	585.7	346.5	-9.6
08.50	14.96	2.18	0.31	17.46	.63	.59	765	586.1	345.9	-10.2
08.75	14.99	2.30	0.33	17.62	.63	.58	766	586.4	345.4	-10.8

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38809.00	14.90	2.41	0.34	17.66	-16.63	-16.58	766	586.8	344.9	-11.4
09.25	14.81	2.52	0.36	17.69	.63	.58	765	587.1	344.4	-12.1
09.50	13.88	2.63	0.38	16.90	.66	.60	760	587.5	343.9	-12.7
09.75	13.88	2.75	0.39	17.02	.65	.59	762	587.9	343.3	-13.3
10.00	13.67	2.84	0.40	16.91	.64	.58	764	588.2	342.8	-13.9
10.25	13.66	2.95	0.42	17.03	.64	.58	765	588.6	342.3	-14.5
10.50	13.64	3.06	0.43	17.13	.65	.58	764	589.0	341.8	-15.1
10.75	13.62	3.16	0.45	17.24	.65	.58	764	589.4	341.2	-15.8
11.00	13.80	3.27	0.46	17.53	.64	.57	767	589.8	340.7	-16.4
11.25	13.77	3.36	0.48	17.62	.64	.56	768	590.2	340.2	-17.0
11.50	13.95	3.46	0.49	17.89	.63	.56	770	590.6	339.7	-17.6
11.75	13.91	3.55	0.51	17.97	.63	.55	771	591.0	339.1	-18.2
12.00	13.87	3.63	0.52	18.02	.63	.55	771	591.4	338.6	-18.9
12.25	15.48	3.73	0.53	19.74	.58	.50	784	591.8	338.1	-19.5
12.50	16.89	3.83	0.55	21.27	.54	.46	794	592.2	337.5	-20.1
12.75	15.28	3.94	0.56	19.77	.57	.48	786	592.7	337.0	-20.7
13.00	14.60	4.02	0.57	19.19	.59	.50	783	593.1	336.5	-21.3
13.25	13.82	4.13	0.58	18.53	.62	.52	777	593.5	335.9	-22.0
13.50	12.62	4.22	0.60	17.43	.66	.56	767	594.0	335.4	-22.6
13.75	11.83	4.32	0.61	16.76	.68	.58	762	594.4	334.9	-23.2
14.00	11.35	4.41	0.62	16.38	.69	.59	761	594.8	334.3	-23.8
14.25	12.12	4.52	0.63	17.27	.66	.55	768	595.3	333.8	-24.4
14.50	12.78	4.61	0.64	18.03	.64	.53	774	595.7	333.2	-25.1
14.75	16.04	4.71	0.66	21.41	.56	.44	796	596.2	332.7	-25.7
15.00	21.47	4.80	0.67	26.95	.45	.33	825	596.6	332.2	-26.3
15.25	18.09	4.90	0.68	23.66	.51	.39	810	597.1	331.6	-26.9
15.50	16.15	4.99	0.69	21.83	.56	.43	798	597.6	331.1	-27.5
15.75	16.91	5.08	0.71	22.71	.55	.42	801	598.0	330.5	-28.2
16.00	20.07	5.18	0.72	25.96	.49	.36	816	598.5	330.0	-28.8
16.25	19.43	5.26	0.73	25.42	.49	.36	817	599.0	329.4	-29.4
16.50	14.74	5.36	0.74	20.84	.58	.44	795	599.4	328.9	-30.0
16.75	14.47	5.43	0.75	20.65	.59	.45	791	599.9	328.3	-30.6
17.00	14.72	5.51	0.76	21.00	.59	.45	792	600.4	327.7	-31.3
17.25	14.77	5.60	0.77	21.13	.59	.44	794	600.9	327.2	-31.9
17.50	14.50	5.66	0.78	20.94	.59	.44	794	601.3	326.6	-32.5
17.75	14.44	5.73	0.79	20.97	.59	.44	794	601.8	326.1	-33.1
18.00	14.08	5.84	0.80	20.72	.60	.45	792	602.3	325.5	-33.8
18.25	13.92	5.87	0.81	20.60	.61	.45	791	602.8	324.9	-34.4
18.50	13.15	5.92	0.82	19.89	.63	.47	787	603.3	324.3	-35.0
18.75	12.79	5.98	0.82	19.60	.63	.46	787	603.8	323.8	-35.6
19.00	12.75	6.03	0.83	19.62	.63	.46	788	604.2	323.2	-36.3
19.25	12.09	6.09	0.84	19.02	.64	.47	784	604.7	322.6	-36.9
19.50	10.61	6.14	0.85	17.59	.68	.51	775	605.2	322.0	-37.5
19.75	9.85	6.18	0.85	16.88	.71	.53	770	605.7	321.4	-38.1
20.00	9.72	6.23	0.86	16.81	.71	.53	770	606.2	320.9	-38.7
20.25	9.08	6.26	0.87	16.21	.73	.54	766	606.7	320.3	-39.4
20.50	8.96	6.31	0.87	16.14	.73	.55	764	607.2	319.7	-40.0
20.75	8.95	6.34	0.88	16.17	.73	.54	767	607.7	319.1	-40.6
21.00	9.99	6.37	0.88	17.23	.70	.50	775	608.1	318.5	-41.2
21.25	10.61	6.43	0.89	17.93	.69	.50	777	608.6	317.9	-41.9
21.50	10.31	6.45	0.89	17.65	.70	.51	776	609.1	317.3	-42.5
21.75	10.01	6.50	0.90	17.41	.70	.50	776	609.6	316.6	-43.1
22.00	9.93	6.55	0.90	17.37	.69	.48	778	610.1	316.0	-43.7
22.25	10.47	6.57	0.91	17.95	.67	.46	783	610.6	315.4	-44.3
22.50	13.21	6.60	0.91	20.71	.61	.39	801	611.1	314.8	-45.0
22.75	15.84	6.62	0.92	23.38	.56	.34	816	611.6	314.1	-45.6
23.00	18.90	6.64	0.92	26.46	.50	.28	831	612.0	313.5	-46.2
38823.10	23.16	6.64	0.92	30.72	-16.43	-16.21	850	612.2	313.2	-46.5
23.20	25.48	6.65	0.92	33.05	.40	.18	858	612.4	313.0	-46.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38823.30	30.41	6.66	0.92	37.99	-16.34	-16.12	875	612.6	312.7	-47.0
23.40	31.45	6.67	0.93	39.05	.32	.09	881	612.8	312.5	-47.2
23.50	31.85	6.68	0.93	39.46	.31	.09	883	613.0	312.2	-47.5
23.60	23.81	6.68	0.93	31.42	.43	.20	852	613.2	311.9	-47.7
23.70	19.02	6.69	0.93	26.65	.51	.28	830	613.4	311.7	-48.0
23.80	15.54	6.70	0.93	23.17	.58	.35	812	613.6	311.4	-48.2
38824.00	15.69	6.71	0.94	23.34	-16.59	-16.36	811	614.0	310.9	-48.7
24.25	12.73	6.71	0.94	20.38	.66	.44	795	614.4	310.2	-49.3
24.50	10.94	6.71	0.94	18.59	.69	.46	785	614.9	309.6	-49.9
24.75	10.21	6.70	0.94	17.86	.70	.46	782	615.4	308.9	-50.6
25.00	9.61	6.69	0.95	17.25	.72	.48	778	615.8	308.2	-51.2
25.25	8.51	6.68	0.95	16.14	.75	.51	770	616.3	307.5	-51.8
25.50	8.37	6.67	0.95	15.99	.76	.53	768	616.8	306.8	-52.4
25.75	8.36	6.65	0.96	15.97	.77	.53	769	617.2	306.1	-53.0
26.00	8.99	6.62	0.96	16.57	.74	.50	773	617.7	305.4	-53.7
26.25	10.37	6.60	0.96	17.92	.70	.45	784	618.1	304.6	-54.3
26.50	9.90	6.58	0.96	17.43	.72	.46	781	618.6	303.9	-54.9
26.75	9.45	6.55	0.96	16.96	.73	.47	778	619.0	303.1	-55.5
27.00	9.02	6.50	0.95	16.48	.75	.49	774	619.5	302.4	-56.1
27.25	8.20	6.47	0.95	15.62	.78	.53	768	619.9	301.6	-56.7
27.50	6.05	6.44	0.95	13.44	.84	.59	750	620.4	300.8	-57.3
27.75	5.68	6.40	0.94	13.02	.86	.60	746	620.8	300.0	-58.0
28.00	5.13	6.36	0.94	12.43	.88	.63	741	621.2	299.2	-58.6
28.25	4.49	6.30	0.94	11.72	.91	.65	734	621.6	298.4	-59.2
28.50	4.18	6.26	0.94	11.38	.92	.66	730	622.1	297.5	-59.8
28.75	4.10	6.20	0.93	11.23	.92	.66	728	622.5	296.7	-60.4
29.00	3.72	6.16	0.93	10.81	.94	.68	724	622.9	295.8	-61.0
29.25	3.47	6.13	0.92	10.51	.96	.69	720	623.3	294.9	-61.6
29.50	3.54	6.09	0.92	10.55	.96	.70	721	623.7	294.0	-62.2
29.75	3.74	6.02	0.91	10.67	.95	.70	723	624.1	293.1	-62.8
30.00	3.74	5.97	0.90	10.61	.96	.70	723	624.5	292.1	-63.4
30.25	3.76	5.90	0.90	10.56	.96	.69	721	624.9	291.1	-64.0
30.50	3.59	5.83	0.89	10.31	.96	.69	718	625.3	290.1	-64.6
30.75	3.44	5.76	0.89	10.09	.98	.71	716	625.6	289.1	-65.2
31.00	2.99	5.70	0.88	9.57	-17.00	.73	709	626.0	288.1	-65.8
31.25	2.76	5.60	0.88	9.24	.02	.75	704	626.4	287.0	-66.4
31.50	2.97	5.51	0.87	9.35	.01	.75	707	626.7	285.9	-67.0
31.75	3.08	5.41	0.86	9.35	.01	.73	705	627.1	284.7	-67.6
32.00	4.56	5.29	0.86	10.71	-16.95	.65	723	627.4	283.5	-68.2
32.25	8.23	5.18	0.85	14.26	.82	.52	760	627.8	282.3	-68.7
32.50	8.08	5.05	0.84	13.97	.83	.53	758	628.1	281.0	-69.3
32.75	6.69	4.93	0.83	12.45	.87	.56	745	628.5	279.7	-69.9
33.00	6.46	4.78	0.83	12.07	.89	.59	740	628.8	278.3	-70.5
33.25	6.24	4.62	0.82	11.68	.91	.62	736	629.1	276.9	-71.0
33.50	5.93	4.51	0.81	11.25	.93	.64	731	629.4	275.4	-71.6
33.75	5.73	4.35	0.81	10.90	.94	.64	726	629.7	273.9	-72.1
34.00	6.38	4.21	0.80	11.39	.92	.61	733	630.0	272.3	-72.7
34.25	7.56	4.03	0.79	12.38	.88	.56	744	630.3	270.6	-73.2
34.50	7.19	3.83	0.79	11.81	.90	.57	738	630.6	268.9	-73.8
34.75	6.73	3.59	0.78	11.10	.93	.61	729	630.9	267.0	-74.3
35.00	6.28	3.38	0.77	10.44	.96	.64	720	631.1	265.1	-74.8
35.25	5.74	3.10	0.76	9.60	-17.00	.68	708	631.4	263.1	-75.3
35.50	5.73	2.82	0.75	9.29	.02	.71	703	631.7	261.0	-75.8
35.75	5.83	2.53	0.74	9.09	.03	.74	701	631.9	258.7	-76.3
36.00	5.62	2.19	0.73	8.54	.05	.76	691	632.2	256.4	-76.8
36.25	5.74	1.85	0.72	8.31	.07	.77	685	632.4	253.9	-77.2
36.50	5.74	1.50	0.71	7.95	.08	.78	678	632.6	251.3	-77.7
36.75	5.65	1.10	0.70	7.44	.11	.80	665	632.8	248.6	-78.1
37.00	6.19	0.63	0.69	7.51	.11	.80	666	633.1	245.7	-78.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38837.25	6.96	0.17	0.68	7.81	-17.09	-16.80	675	633.3	242.6	-78.9
37.50	7.33	0.00	0.67	8.00	.08	.80	681	633.5	239.5	-79.3
37.75	7.81	0.00	0.66	8.47	.06	.77	690	633.6	236.1	-79.6
38.00	8.09	0.00	0.65	8.74	.05	.76	696	633.8	232.7	-79.9
38.25	8.48	0.00	0.64	9.12	.03	.74	703	634.0	229.1	-80.2
38.50	8.99	0.00	0.63	9.62	.00	.70	708	634.2	225.3	-80.5
38.75	9.39	0.00	0.62	10.01	-16.98	.67	713	634.3	221.5	-80.7
39.00	9.60	0.00	0.60	10.20	.98	.66	716	634.5	217.5	-80.9
39.25	9.70	0.00	0.59	10.29	.97	.66	717	634.6	213.5	-81.1
39.50	8.97	0.00	0.58	9.55	-17.00	.69	706	634.8	209.5	-81.2
39.75	9.08	0.00	0.57	9.65	.00	.68	707	634.9	205.4	-81.3
40.00	8.98	0.00	0.56	9.54	.00	.68	704	635.0	201.3	-81.4
40.25	9.70	0.00	0.55	10.25	-16.97	.64	714	635.1	197.3	-81.4
40.50	10.43	0.00	0.54	10.97	.94	.62	724	635.2	193.4	-81.4
40.75	10.94	0.00	0.52	11.46	.92	.60	730	635.3	189.5	-81.4
41.00	10.92	0.00	0.51	11.43	.92	.59	729	635.4	185.8	-81.3
41.25	10.90	0.00	0.50	11.40	.93	.61	728	635.5	182.2	-81.2
41.50	10.46	0.00	0.49	10.95	.95	.64	724	635.6	178.7	-81.1
38841.60	10.06	0.00	0.48	10.54	-16.96	-16.66	719	635.6	177.4	-81.0
41.80	11.25	0.00	0.47	11.72	.92	.61	733	635.6	174.8	-80.9
42.00	13.41	0.00	0.46	13.87	.84	.51	754	635.7	172.2	-80.8
42.20	16.36	0.00	0.45	16.81	.75	.41	779	635.7	169.8	-80.6
42.40	15.91	0.00	0.44	16.35	.76	.41	775	635.7	167.5	-80.4
42.60	15.44	0.00	0.43	15.87	.77	.42	772	635.8	165.2	-80.3
42.80	15.13	0.00	0.42	15.55	.78	.43	769	635.8	163.1	-80.1
43.00	16.27	0.00	0.41	16.68	.75	.39	779	635.8	161.0	-79.9
43.20	15.45	0.00	0.40	15.85	.77	.42	771	635.8	159.0	-79.6
43.40	14.78	0.00	0.39	15.17	.80	.47	764	635.8	157.1	-79.4
43.60	14.59	0.00	0.38	14.97	.80	.46	762	635.8	155.3	-79.2
43.80	13.89	0.00	0.37	14.26	.82	.47	755	635.8	153.5	-79.0
44.00	14.16	0.00	0.36	14.52	.82	.48	757	635.8	151.8	-78.7
44.20	15.22	0.00	0.35	15.57	.79	.46	766	635.8	150.2	-78.5
44.40	17.24	0.00	0.34	17.58	.73	.39	782	635.8	148.6	-78.2
44.60	15.84	0.00	0.33	16.17	.76	.41	772	635.7	147.1	-77.9
44.80	14.59	0.00	0.32	14.91	.80	.46	759	635.7	145.7	-77.7
45.00	13.97	0.00	0.30	14.27	.82	.49	753	635.7	144.3	-77.4
38845.25	14.11	0.00	0.29	14.40	-16.81	-16.47	754	635.6	142.6	-77.1
45.50	13.99	0.00	0.27	14.26	.82	.48	753	635.6	141.0	-76.7
45.75	13.42	0.00	0.26	13.68	.84	.51	746	635.5	139.5	-76.3
46.00	13.05	0.00	0.25	13.30	.86	.53	742	635.4	138.0	-76.0
46.25	12.85	0.00	0.24	13.09	.86	.53	739	635.3	136.6	-75.6
46.50	12.55	0.00	0.22	12.77	.87	.54	735	635.2	135.2	-75.2
46.75	12.37	0.00	0.21	12.58	.88	.56	732	635.1	133.9	-74.8
47.00	12.09	0.00	0.19	12.28	.89	.57	728	635.0	132.7	-74.5
47.25	11.81	0.00	0.18	11.99	.90	.59	724	634.9	131.4	-74.1
47.50	11.65	0.00	0.17	11.82	.91	.60	721	634.8	130.2	-73.7
47.75	11.29	0.00	0.15	11.44	.92	.61	716	634.6	129.1	-73.3
48.00	11.04	0.00	0.14	11.18	.93	.64	714	634.5	128.0	-72.9
48.25	10.90	0.00	0.12	11.02	.94	.64	710	634.3	126.9	-72.5
48.50	10.57	0.00	0.11	10.68	.95	.65	704	634.2	125.8	-72.1
48.75	10.66	0.00	0.10	10.76	.95	.65	704	634.0	124.8	-71.7
49.00	10.65	0.00	0.08	10.73	.95	.64	703	633.8	123.8	-71.3
49.25	10.97	0.00	0.07	11.04	.94	.65	709	633.6	122.9	-70.9
49.50	11.19	0.00	0.06	11.25	.93	.65	713	633.5	121.9	-70.4
49.75	11.42	0.00	0.05	11.47	.92	.64	714	633.3	121.0	-70.0
50.00	11.45	0.00	0.04	11.49	.92	.63	713	633.1	120.1	-69.6
50.25	11.39	0.00	0.02	11.41	.92	.63	711	632.8	119.2	-69.2
50.50	11.44	0.00	0.01	11.45	.92	.62	710	632.6	118.3	-68.8

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38850.75	11.09	0.00	0.00	11.09	-16.93	-16.65	705	632.4	117.4	-68.4
51.00	10.96	0.00	-0.02	10.94	.94	.66	704	632.1	116.6	-67.9
51.25	10.74	0.00	-0.03	10.71	.95	.66	698	631.9	115.8	-67.5
51.50	10.63	0.00	-0.04	10.59	.95	.66	695	631.7	115.0	-67.1
51.75	10.63	0.00	-0.05	10.58	.95	.67	695	631.4	114.2	-66.7
52.00	10.65	0.00	-0.06	10.59	.95	.68	696	631.1	113.4	-66.2
52.25	10.89	0.00	-0.08	10.81	.94	.67	699	630.9	112.6	-65.8
52.50	10.93	0.00	-0.09	10.84	.94	.67	698	630.6	111.9	-65.4
52.75	10.77	0.00	-0.10	10.67	.95	.68	695	630.3	111.1	-65.0
53.00	10.94	0.00	-0.12	10.82	.94	.68	698	630.0	110.4	-64.5
53.25	10.92	0.00	-0.13	10.79	.94	.68	696	629.7	109.7	-64.1
53.50	10.91	0.00	-0.14	10.77	.94	.68	695	629.4	108.9	-63.7
53.75	11.11	0.00	-0.15	10.96	.93	.67	696	629.1	108.2	-63.2
54.00	11.34	0.00	-0.16	11.18	.92	.66	699	628.8	107.5	-62.8
54.25	11.26	0.00	-0.17	11.09	.93	.66	697	628.5	106.8	-62.4
54.50	11.51	0.00	-0.18	11.33	.91	.64	699	628.1	106.2	-61.9
54.75	11.46	0.00	-0.19	11.27	.91	.63	698	627.8	105.5	-61.5
55.00	11.63	0.00	-0.20	11.43	.91	.64	699	627.5	104.8	-61.0
55.25	11.82	0.00	-0.22	11.60	.90	.64	702	627.1	104.2	-60.6
55.50	12.02	0.00	-0.24	11.78	.90	.64	704	626.8	103.5	-60.2
55.75	12.03	0.00	-0.25	11.78	.90	.65	704	626.4	102.9	-59.7
56.00	12.16	0.00	-0.26	11.90	.89	.64	705	626.0	102.2	-59.3
56.25	12.40	0.00	-0.28	12.12	.88	.63	706	625.7	101.6	-58.9
56.50	12.56	0.00	-0.29	12.27	.87	.62	708	625.3	100.9	-58.4
56.75	12.53	0.00	-0.30	12.23	.87	.61	707	624.9	100.3	-58.0
57.00	13.65	0.00	-0.32	13.33	.83	.57	719	624.5	99.7	-57.5
57.25	15.00	0.00	-0.33	14.67	.79	.52	733	624.1	99.1	-57.1
57.50	17.50	0.00	-0.34	17.16	.72	.46	754	623.7	98.5	-56.7
57.75	15.97	0.00	-0.36	15.61	.76	.51	740	623.3	97.8	-56.2
58.00	15.48	0.00	-0.37	15.11	.78	.53	735	622.9	97.2	-55.8
58.25	15.14	0.00	-0.38	14.76	.79	.55	732	622.5	96.6	-55.3
58.50	15.09	0.00	-0.39	14.70	.79	.56	731	622.1	96.0	-54.9
58.75	15.11	0.00	-0.41	14.70	.79	.56	730	621.7	95.4	-54.4
59.00	16.97	0.00	-0.42	16.55	.74	.50	746	621.3	94.9	-54.0
59.25	18.90	0.00	-0.43	18.47	.68	.43	761	620.9	94.3	-53.6
59.50	17.69	0.00	-0.45	17.24	.71	.46	753	620.4	93.7	-53.1
59.75	16.01	0.00	-0.46	15.55	.76	.52	737	620.0	93.1	-52.7
60.00	15.86	0.00	-0.47	15.39	.76	.52	735	619.6	92.5	-52.2
60.25	15.96	0.00	-0.49	15.47	.75	.51	737	619.1	92.0	-51.8
60.50	15.92	0.00	-0.50	15.42	.75	.52	736	618.7	91.4	-51.3
60.75	15.51	0.00	-0.51	15.00	.77	.55	731	618.2	90.8	-50.9
61.00	15.46	0.00	-0.52	14.94	.77	.55	730	617.8	90.2	-50.4
61.25	15.67	0.00	-0.53	15.14	.76	.54	731	617.3	89.7	-50.0
61.50	15.82	0.00	-0.54	15.28	.76	.54	733	616.9	89.1	-49.6
61.75	16.11	0.00	-0.56	15.55	.75	.53	735	616.4	88.6	-49.1
62.00	19.23	0.00	-0.57	18.66	.66	.43	761	616.0	88.0	-48.7
62.25	18.66	0.00	-0.58	18.08	.67	.44	757	615.5	87.5	-48.2
62.50	18.74	0.00	-0.59	18.15	.67	.46	755	615.1	86.9	-47.8
62.75	18.74	0.00	-0.60	18.14	.67	.46	754	614.6	86.4	-47.3
63.00	18.05	0.00	-0.62	17.43	.68	.47	750	614.1	85.8	-46.9
63.25	17.48	0.00	-0.63	16.85	.69	.48	747	613.7	85.3	-46.4
63.50	17.55	0.00	-0.64	16.91	.69	.49	746	613.2	84.7	-46.0
63.75	17.53	0.00	-0.65	16.88	.70	.50	744	612.7	84.2	-45.5
64.00	16.59	0.00	-0.66	15.93	.73	.53	736	612.3	83.6	-45.1
64.25	17.01	0.00	-0.67	16.34	.71	.51	740	611.8	83.1	-44.6
64.50	17.64	0.00	-0.68	16.96	.69	.50	745	611.3	82.6	-44.2
64.75	18.17	0.00	-0.69	17.48	.68	.49	748	610.9	82.0	-43.7
65.00	18.81	0.00	-0.70	18.11	.66	.47	753	610.4	81.5	-43.3
65.25	20.06	0.00	-0.72	19.34	.63	.44	761	609.9	80.9	-42.8
65.50	21.21	0.00	-0.73	20.48	.60	.42	768	609.4	80.4	-42.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38865.75	21.31	0.00	-0.74	20.57	-16.60	-16.42	768	609.0	79.9	-41.9
66.00	21.09	0.00	-0.75	20.34	.60	.42	767	608.5	79.4	-41.5
66.25	22.93	0.00	-0.76	22.17	.56	.38	778	608.0	78.8	-41.0
66.50	23.92	0.00	-0.77	23.15	.54	.37	783	607.6	78.3	-40.6
66.75	22.09	0.00	-0.78	21.31	.58	.41	772	607.1	77.8	-40.1
67.00	21.07	0.00	-0.79	20.28	.60	.43	766	606.7	77.3	-39.7
67.25	19.39	0.00	-0.80	18.59	.64	.47	754	606.2	76.7	-39.3
67.50	21.94	0.00	-0.80	21.14	.58	.42	770	605.7	76.2	-38.8
67.75	23.20	0.00	-0.81	22.39	.54	.38	780	605.3	75.7	-38.4
68.00	27.49	0.00	-0.82	26.67	.45	.29	805	604.8	75.2	-37.9
38868.20	43.71	0.00	-0.82	42.89	-16.25	-16.09	862	604.4	74.8	-37.6
68.30	62.52	0.00	-0.83	61.69	.08	-15.92	911	604.3	74.5	-37.4
68.40	87.16	0.00	-0.83	86.33	-15.92	.76	964	604.1	74.3	-37.2
68.50	105.31	0.00	-0.84	104.47	.81	.66	999	603.9	74.1	-37.0
68.60	80.04	0.00	-0.84	79.20	.93	.78	958	603.7	73.9	-36.8
68.70	70.32	0.00	-0.84	69.48	-16.00	.85	936	603.5	73.7	-36.7
68.80	63.18	0.00	-0.84	62.34	.05	.90	918	603.4	73.5	-36.5
68.90	55.38	0.00	-0.84	54.54	.12	.97	898	603.2	73.3	-36.3
69.00	46.28	0.00	-0.85	45.43	.21	-16.05	872	603.0	73.1	-36.1
69.10	35.23	0.00	-0.85	34.38	.33	.18	835	602.8	72.9	-35.9
38869.25	33.56	0.00	-0.85	32.71	-16.36	-16.21	827	602.5	72.6	-35.7
69.50	33.52	0.00	-0.86	32.66	.36	.22	825	602.1	72.1	-35.2
69.75	33.76	0.00	-0.86	32.90	.36	.21	827	601.7	71.5	-34.8
70.00	33.85	0.00	-0.87	32.98	.35	.21	829	601.2	71.0	-34.3
70.25	32.15	0.00	-0.88	31.27	.37	.23	822	600.8	70.5	-33.9
70.50	30.11	0.00	-0.88	29.23	.40	.27	813	600.4	70.0	-33.4
70.75	28.46	0.00	-0.89	27.57	.43	.29	806	599.9	69.5	-33.0
71.00	27.82	0.00	-0.89	26.93	.44	.31	801	599.5	69.0	-32.5
71.25	27.15	0.00	-0.90	26.25	.46	.33	796	599.1	68.5	-32.1
71.50	26.04	0.00	-0.90	25.14	.48	.36	789	598.7	68.0	-31.6
71.75	25.34	0.00	-0.90	24.44	.49	.37	786	598.2	67.5	-31.2
72.00	24.20	0.00	-0.90	23.30	.51	.39	781	597.8	66.9	-30.7
72.25	24.08	0.00	-0.91	23.17	.51	.39	781	597.4	66.4	-30.3
72.50	23.75	0.00	-0.91	22.84	.51	.40	779	597.0	65.9	-29.8
72.75	24.44	0.00	-0.92	23.52	.50	.39	783	596.6	65.4	-29.3
73.00	25.96	0.00	-0.92	25.04	.47	.36	790	596.2	64.9	-28.9
73.25	27.68	0.00	-0.92	26.76	.44	.33	798	595.8	64.4	-28.4
73.50	27.64	0.00	-0.92	26.72	.44	.33	798	595.4	63.9	-28.0
73.75	27.80	0.00	-0.92	26.88	.43	.33	799	595.1	63.4	-27.5
74.00	27.66	0.00	-0.93	26.73	.43	.33	799	594.7	62.9	-27.1
74.25	28.04	0.00	-0.93	27.11	.42	.32	801	594.3	62.4	-26.6
74.50	28.01	0.00	-0.94	27.07	.42	.33	801	593.9	61.9	-26.2
74.75	27.90	0.00	-0.94	26.96	.42	.33	801	593.5	61.4	-25.7
75.00	25.20	0.00	-0.94	24.26	.47	.38	788	593.2	60.9	-25.3
75.25	22.94	0.00	-0.95	21.99	.51	.43	775	592.8	60.4	-24.8
75.50	22.97	0.00	-0.95	22.02	.51	.43	775	592.5	59.9	-24.4
75.75	23.23	0.00	-0.95	22.28	.50	.42	777	592.1	59.4	-23.9
76.00	23.20	0.00	-0.95	22.25	.50	.42	777	591.8	58.8	-23.4
76.25	23.72	0.00	-0.95	22.77	.49	.41	781	591.4	58.3	-23.0
76.50	24.16	0.00	-0.95	23.21	.48	.40	783	591.1	57.8	-22.5
76.75	24.73	0.00	-0.95	23.78	.47	.40	785	590.7	57.3	-22.1
77.00	24.72	0.00	-0.95	23.77	.46	.39	786	590.4	56.8	-21.6
77.25	24.63	-0.23	-0.95	23.45	.47	.40	784	590.1	56.3	-21.2
77.50	24.38	-0.78	-0.95	22.65	.49	.42	779	589.7	55.8	-20.7
77.75	24.27	-1.02	-0.95	22.30	.49	.43	778	589.4	55.3	-20.3
78.00	24.20	-1.50	-0.95	21.75	.50	.44	775	589.1	54.8	-19.8
78.25	24.18	-1.74	-0.95	21.49	.51	.45	774	588.8	54.3	-19.3
78.50	24.31	-1.93	-0.94	21.44	.51	.45	773	588.5	53.8	-18.9

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38878.75	24.59	-2.10	-0.94	21.56	-16.51	-16.45	773	588.2	53.3	-18.4
79.00	25.03	-2.20	-0.94	21.89	.50	.45	775	587.9	52.8	-18.0
79.25	25.11	-2.32	-0.93	21.86	.50	.45	775	587.6	52.3	-17.5
79.50	24.21	-2.39	-0.93	20.89	.51	.46	771	587.3	51.8	-17.1
79.75	24.51	-2.47	-0.92	21.12	.51	.46	773	587.0	51.3	-16.6
80.00	24.97	-2.54	-0.92	21.52	.49	.45	776	586.7	50.8	-16.2
80.25	25.81	-2.60	-0.91	22.30	.47	.43	781	586.4	50.3	-15.7
80.50	25.37	-2.64	-0.91	21.82	.48	.44	779	586.1	49.8	-15.2
80.75	25.42	-2.68	-0.90	21.83	.48	.44	778	585.9	49.3	-14.8
81.00	25.84	-2.70	-0.90	22.24	.48	.44	780	585.6	48.8	-14.3
81.25	25.84	-2.71	-0.89	22.23	.47	.44	780	585.3	48.3	-13.9
81.50	25.22	-2.72	-0.89	21.61	.49	.45	777	585.1	47.6	-13.4
81.75	24.68	-2.75	-0.88	21.06	.50	.46	774	584.8	47.3	-13.0
82.00	24.53	-2.75	-0.88	20.90	.50	.47	773	584.5	46.8	-12.5
82.25	24.14	-2.75	-0.87	20.53	.51	.48	771	584.3	46.3	-12.0
82.50	23.53	-2.74	-0.87	19.92	.52	.50	767	584.0	45.8	-11.6
82.75	22.67	-2.71	-0.86	19.10	.54	.51	763	583.8	45.3	-11.1
83.00	22.32	-2.70	-0.86	18.75	.54	.52	762	583.6	44.8	-10.7
83.25	22.45	-2.68	-0.85	18.92	.54	.51	763	583.3	44.2	-10.2
83.50	22.98	-2.64	-0.84	19.50	.52	.50	767	583.1	43.7	-9.8
83.75	23.48	-2.61	-0.84	20.03	.51	.49	770	582.9	43.2	-9.3
84.00	23.55	-2.58	-0.83	20.14	.51	.49	771	582.6	42.7	-8.8
84.25	23.50	-2.53	-0.82	20.15	.51	.49	771	582.4	42.2	-8.4
84.50	23.42	-2.46	-0.81	20.15	.50	.49	772	582.2	41.7	-7.9
84.75	23.32	-2.41	-0.80	20.11	.50	.49	772	582.0	41.2	-7.5
85.00	24.66	-2.36	-0.80	21.50	.47	.46	781	581.8	40.7	-7.0
38885.20	25.78	-2.31	-0.79	22.68	-16.44	-16.42	788	581.6	40.3	-6.6
85.30	32.92	-2.29	-0.79	29.84	.30	.29	822	581.5	40.1	-6.5
85.40	42.00	-2.26	-0.78	38.97	.18	.17	856	581.5	39.9	-6.3
85.50	45.26	-2.23	-0.78	42.24	.14	.13	867	581.4	39.7	-6.1
85.60	38.80	-2.20	-0.78	35.82	.21	.20	846	581.3	39.5	-5.9
85.70	32.35	-2.17	-0.77	29.40	.31	.30	821	581.2	39.3	-5.7
85.80	31.71	-2.15	-0.77	28.79	.32	.32	817	581.1	39.1	-5.5
85.90	31.07	-2.12	-0.76	28.19	.33	.33	815	581.1	38.9	-5.3
38886.00	29.60	-2.10	-0.76	26.74	-16.36	-16.35	809	581.0	38.7	-5.2
86.25	28.88	-2.03	-0.75	26.11	.37	.36	805	580.8	38.2	-4.7
86.50	28.14	-1.95	-0.74	25.45	.39	.38	801	580.6	37.6	-4.2
86.75	27.81	-1.86	-0.73	25.22	.39	.39	800	580.5	37.1	-3.8
87.00	27.46	-1.79	-0.72	24.95	.39	.39	799	580.3	36.6	-3.3
87.25	26.78	-1.71	-0.71	24.36	.40	.40	798	580.1	36.1	-2.9
87.50	26.20	-1.63	-0.70	23.87	.41	.41	796	580.0	35.6	-2.4
87.75	26.01	-1.55	-0.69	23.78	.42	.42	794	579.8	35.1	-1.9
88.00	25.51	-1.46	-0.68	23.37	.43	.43	792	579.6	34.6	-1.5
88.25	26.03	-1.38	-0.67	23.98	.41	.42	795	579.5	34.1	-1.0
88.50	26.12	-1.28	-0.66	24.18	.41	.41	797	579.4	33.6	-0.6
88.75	27.55	-1.19	-0.65	25.71	.37	.38	805	579.2	33.0	-0.1
38888.80	27.76	-1.18	-0.64	25.94	-16.37	-16.37	807	579.2	32.9	0.0
89.00	30.73	-1.11	-0.64	28.98	.31	.32	821	579.1	32.5	0.4
89.20	31.91	-1.03	-0.63	30.25	.28	.29	829	579.0	32.1	0.7
89.40	30.66	-0.97	-0.62	29.07	.30	.31	824	578.9	31.7	1.1
89.60	30.06	-0.91	-0.61	28.54	.32	.33	820	578.8	31.3	1.5
89.80	28.80	-0.81	-0.61	27.38	.35	.35	813	578.7	30.9	1.8
90.00	29.16	-0.75	-0.60	27.80	.34	.35	816	578.6	30.5	2.2
90.20	30.64	-0.69	-0.59	29.36	.30	.31	824	578.5	30.0	2.6
90.40	31.48	-0.61	-0.58	30.29	.29	.30	828	578.4	29.6	2.9
90.60	29.07	-0.52	-0.57	27.98	.32	.34	818	578.4	29.2	3.3
90.80	26.83	-0.45	-0.56	25.82	.37	.38	808	578.3	28.8	3.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38891.00	24.47	-0.39	-0.55	23.53	-16.41	-16.42	797	578.2	28.4	4.1
91.25	23.46	-0.28	-0.54	22.64	.43	.44	793	578.1	27.9	4.5
91.50	22.24	-0.19	-0.53	21.52	.46	.47	786	578.0	27.3	5.0
91.75	22.46	-0.09	-0.51	21.86	.45	.46	788	578.0	26.8	5.4
92.00	22.28	0.01	-0.50	21.79	.45	.46	789	577.9	26.3	5.9
92.25	22.19	0.11	-0.49	21.81	.44	.45	791	577.8	25.8	6.4
92.50	22.21	0.20	-0.48	21.93	.43	.45	792	577.8	25.2	6.8
92.75	21.91	0.29	-0.46	21.75	.44	.46	790	577.7	24.7	7.3
93.00	21.93	0.39	-0.45	21.87	.45	.46	790	577.7	24.2	7.8
93.25	21.85	0.48	-0.44	21.89	.45	.46	790	577.6	23.6	8.2
93.50	21.77	0.60	-0.43	21.94	.44	.46	791	577.6	23.1	8.7
93.75	21.49	0.69	-0.41	21.77	.44	.46	791	577.6	22.6	9.1
94.00	20.90	0.76	-0.40	21.26	.45	.47	789	577.5	22.0	9.6
94.25	20.52	0.87	-0.39	21.00	.46	.47	789	577.5	21.5	10.1
94.50	20.46	0.95	-0.38	21.03	.46	.48	789	577.5	21.0	10.5
94.75	20.92	1.05	-0.36	21.61	.45	.46	792	577.5	20.4	11.0
95.00	21.07	1.16	-0.35	21.88	.44	.46	794	577.5	19.9	11.5
95.25	21.55	1.25	-0.34	22.46	.42	.44	798	577.5	19.4	11.9
95.50	22.24	1.35	-0.32	23.26	.41	.43	802	577.5	18.8	12.4
95.75	21.98	1.44	-0.31	23.11	.41	.43	802	577.5	18.3	12.9
96.00	22.06	1.55	-0.30	23.31	.40	.42	805	577.5	17.7	13.3
96.25	25.57	1.64	-0.28	26.93	.33	.35	823	577.6	17.2	13.8
96.50	35.60	1.74	-0.26	37.08	.18	.20	863	577.6	16.7	14.3
96.75	37.45	1.84	-0.25	39.04	.15	.17	871	577.6	16.1	14.7
97.00	32.26	1.94	-0.24	33.96	.22	.23	854	577.7	15.6	15.2
97.25	28.83	2.04	-0.23	30.64	.27	.28	841	577.7	15.0	15.7
97.50	28.09	2.13	-0.21	30.01	.28	.29	839	577.8	14.5	16.1
97.75	26.93	2.23	-0.20	28.97	.29	.31	835	577.8	13.9	16.6
98.00	27.01	2.33	-0.18	29.16	.29	.31	836	577.9	13.3	17.1
98.25	27.19	2.43	-0.17	29.45	.29	.30	838	578.0	12.8	17.5
98.50	26.94	2.53	-0.16	29.31	.29	.30	838	578.1	12.2	18.0
98.75	25.45	2.63	-0.14	27.94	.31	.33	832	578.1	11.7	18.5
99.00	24.67	2.74	-0.13	27.27	.32	.33	830	578.2	11.1	18.9
99.25	23.88	2.84	-0.11	26.61	.33	.34	828	578.3	10.5	19.4
99.50	23.39	2.93	-0.10	26.22	.34	.35	827	578.4	10.0	19.9
99.75	23.41	3.04	-0.08	26.36	.34	.35	827	578.5	9.4	20.3
38900.00	23.61	3.14	-0.07	26.69	.34	.35	829	578.6	8.8	20.8
00.25	24.12	3.24	-0.05	27.31	.33	.33	832	578.8	8.3	21.3
00.50	24.51	3.34	-0.04	27.81	.32	.33	835	578.9	7.7	21.8
00.75	24.78	3.45	-0.02	28.20	.31	.32	838	579.0	7.1	22.2
01.00	26.58	3.55	-0.01	30.12	.28	.28	847	579.1	6.5	22.7
01.25	27.12	3.65	0.00	30.78	.26	.27	850	579.3	5.9	23.2
01.50	28.16	3.76	0.02	31.94	.25	.26	854	579.4	5.3	23.6
01.75	29.81	3.86	0.04	33.71	.23	.23	861	579.6	4.8	24.1
02.00	32.67	3.96	0.05	36.68	.19	.19	873	579.7	4.2	24.6
02.25	32.41	4.05	0.06	36.52	.19	.19	874	579.9	3.6	25.1
02.50	31.29	4.14	0.08	35.52	.20	.20	870	580.1	3.0	25.5
02.75	30.67	4.24	0.09	35.00	.21	.21	868	580.2	2.4	26.0
03.00	30.23	4.33	0.11	34.68	.22	.21	868	580.4	1.8	26.5
03.25	29.15	4.43	0.12	33.70	.23	.22	865	580.6	1.1	26.9
03.50	28.76	4.52	0.14	33.42	.23	.23	864	580.8	0.5	27.4
03.75	26.79	4.60	0.16	31.56	.26	.25	858	580.9	359.9	27.9
04.00	26.35	4.70	0.17	31.22	.27	.26	856	581.1	359.3	28.4
04.25	25.56	4.79	0.19	30.55	.28	.27	854	581.3	358.7	28.8
04.50	24.85	4.89	0.20	29.94	.29	.27	853	581.5	358.0	29.3
04.75	23.90	4.95	0.22	29.07	.30	.29	850	581.7	357.4	29.8
05.00	22.09	5.03	0.23	27.35	.33	.31	843	581.9	356.8	30.3
05.25	20.03	5.12	0.24	25.39	.37	.35	834	582.1	356.1	30.7
05.50	18.88	5.20	0.26	24.34	.39	.37	828	582.3	355.5	31.2
05.75	16.96	5.27	0.28	22.51	.42	.41	820	582.5	354.8	31.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38906.00	16.25	5.36	0.29	21.89	-16.44	-16.42	818	582.7	354.2	32.2
06.25	16.22	5.43	0.30	21.95	.44	.41	819	583.0	353.5	32.6
06.50	16.15	5.52	0.31	21.98	.44	.41	819	583.2	352.8	33.1
06.75	16.77	5.60	0.32	22.68	.43	.40	823	583.4	352.1	33.6
07.00	17.55	5.66	0.34	23.55	.41	.38	828	583.6	351.5	34.1
07.25	17.77	5.74	0.35	23.87	.40	.37	832	583.9	350.8	34.5
07.50	17.64	5.83	0.36	23.83	.40	.37	831	584.1	350.1	35.0
07.75	17.06	5.91	0.38	23.34	.41	.38	829	584.3	349.4	35.5
08.00	16.22	5.97	0.39	22.58	.43	.39	826	584.5	348.7	36.0
08.25	15.33	6.04	0.40	21.77	.45	.41	822	584.8	347.9	36.4
08.50	14.60	6.13	0.42	21.15	.46	.43	818	585.0	347.2	36.9
08.75	13.83	6.20	0.43	20.46	.47	.43	817	585.3	346.5	37.4
09.00	13.11	6.27	0.44	19.82	.48	.44	814	585.5	345.7	37.9
09.25	11.82	6.36	0.45	18.63	.52	.48	806	585.7	345.0	38.3
09.50	10.58	6.44	0.46	17.49	.56	.51	798	586.0	344.2	38.8
09.75	9.50	6.48	0.47	16.46	.58	.54	793	586.2	343.4	39.3
10.00	8.89	6.57	0.49	15.94	.59	.55	790	586.5	342.6	39.8
38942.25	8.79	0.00	0.73	9.52	-16.97	-16.68	780	619.0	131.1	23.9
42.50	8.11	0.00	0.72	8.83	-17.00	.72	771	619.2	130.5	23.4
42.75	7.83	0.00	0.72	8.55	.02	.74	766	619.4	129.9	22.9
43.00	7.32	0.00	0.72	8.04	.05	.76	759	619.6	129.2	22.3
43.25	7.41	0.00	0.71	8.12	.05	.76	760	619.8	128.6	21.8
43.50	6.66	0.00	0.70	7.36	.11	.82	747	620.0	128.0	21.3
43.75	6.92	0.00	0.70	7.62	.10	.81	750	620.2	127.4	20.8
44.00	7.17	0.00	0.70	7.87	.09	.80	753	620.4	126.8	20.3
44.25	8.65	0.00	0.69	9.34	.01	.72	773	620.6	126.2	19.8
44.50	9.49	0.00	0.69	10.18	-16.98	.69	782	620.7	125.6	19.3
44.75	10.21	0.00	0.68	10.89	.95	.67	789	620.9	125.1	18.8
45.00	9.88	0.00	0.68	10.56	.96	.67	786	621.1	124.5	18.2
45.25	8.60	0.00	0.67	9.27	-17.02	.73	772	621.2	123.9	17.7
45.50	8.45	0.00	0.66	9.11	.03	.75	769	621.4	123.3	17.2
45.75	7.05	0.00	0.66	7.71	.11	.82	750	621.5	122.7	16.7
46.00	6.56	0.00	0.66	7.22	.14	.85	743	621.7	122.1	16.2
46.25	8.02	0.00	0.65	8.67	.06	.76	764	621.8	121.6	15.7
46.50	8.85	0.00	0.64	9.49	.02	.73	774	621.9	121.0	15.2
46.75	9.25	0.00	0.64	9.89	.01	.72	778	622.1	120.4	14.7
47.00	9.64	0.00	0.63	10.27	-16.99	.70	783	622.2	119.9	14.1
47.25	10.22	0.00	0.62	10.84	.95	.65	790	622.3	119.3	13.6
47.50	15.85	0.00	0.62	16.47	.75	.45	841	622.4	118.7	13.1
47.75	17.76	0.00	0.62	18.38	.70	.39	856	622.5	118.2	12.6
48.00	16.65	0.00	0.61	17.26	.74	.43	845	622.6	117.6	12.1
48.25	13.58	0.00	0.60	14.18	.83	.53	821	622.7	117.0	11.6
48.50	12.35	0.00	0.60	12.95	.87	.57	811	622.8	116.5	11.1
48.75	11.52	0.00	0.59	12.11	.91	.61	802	622.9	115.9	10.6
49.00	12.96	0.00	0.59	13.55	.85	.55	816	623.0	115.4	10.1
49.25	16.04	0.00	0.58	16.62	.75	.44	844	623.1	114.8	9.6
49.50	15.80	0.00	0.58	16.38	.76	.45	842	623.2	114.3	9.0
49.75	14.63	0.00	0.58	15.21	.79	.48	833	623.2	113.7	8.5
50.00	15.93	0.00	0.57	16.50	.74	.43	846	623.3	113.2	8.0
50.25	15.36	0.00	0.57	15.93	.75	.44	842	623.4	112.6	7.5
50.50	14.36	0.00	0.56	14.92	.80	.49	831	623.4	112.1	7.0
50.75	13.78	0.00	0.56	14.34	.83	.52	824	623.5	111.5	6.5
51.00	13.29	0.00	0.56	13.85	.84	.52	822	623.5	111.0	6.0
51.25	13.82	0.00	0.55	14.37	.81	.50	828	623.6	110.4	5.5
51.50	17.04	0.00	0.54	17.58	.72	.41	853	623.6	109.9	5.0
51.75	14.77	0.00	0.54	15.31	.79	.47	835	623.7	109.3	4.5
52.00	12.60	0.00	0.54	13.14	.87	.56	814	623.7	108.8	4.0
52.25	12.38	0.00	0.54	12.92	.88	.58	810	623.8	108.3	3.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38952.50	12.06	0.00	0.54	12.60	-16.90	-16.60	806	623.8	107.7	3.0
52.75	11.53	0.00	0.53	12.06	.92	.62	801	623.9	107.2	2.5
53.00	10.37	0.00	0.52	10.89	.96	.66	790	623.9	106.6	2.0
53.25	9.21	0.00	0.52	9.73	-17.01	.71	777	623.9	106.1	1.5
53.50	8.25	0.00	0.52	8.77	.06	.76	765	624.0	105.6	1.0
53.75	8.83	0.00	0.52	9.35	.03	.72	773	624.0	105.0	0.5
54.00	8.79	0.00	0.51	9.30	.01	.70	775	624.0	104.5	-0.1
54.25	11.95	0.00	0.51	12.46	-16.88	.57	809	624.1	104.0	-0.6
54.50	13.97	0.00	0.51	14.48	.83	.52	824	624.1	103.4	-1.1
54.75	14.44	0.00	0.50	14.94	.81	.50	828	624.1	102.9	-1.6
55.00	13.46	0.00	0.50	13.96	.84	.53	820	624.1	102.4	-2.1
55.25	13.20	0.00	0.50	13.70	.85	.55	817	624.2	101.8	-2.6
55.50	13.05	0.00	0.50	13.55	.86	.56	815	624.2	101.3	-3.1
55.75	12.79	0.00	0.49	13.28	.87	.57	813	624.2	100.8	-3.6
56.00	12.63	0.00	0.49	13.12	.87	.57	812	624.3	100.3	-4.1
56.25	12.67	0.00	0.48	13.15	.87	.56	813	624.3	99.7	-4.6
56.50	12.82	0.00	0.48	13.30	.86	.55	816	624.3	99.2	-5.1
56.75	14.21	0.00	0.48	14.69	.81	.50	828	624.4	98.7	-5.6
57.00	14.05	0.00	0.48	14.53	.82	.51	826	624.4	98.2	-6.1
57.25	13.68	0.00	0.47	14.15	.83	.52	822	624.4	97.6	-6.6
57.50	13.32	0.00	0.47	13.79	.85	.55	818	624.5	97.1	-7.1
57.75	12.54	0.00	0.47	13.01	.88	.58	811	624.5	96.6	-7.6
58.00	11.97	0.00	0.47	12.44	.90	.60	805	624.6	96.1	-8.0
58.25	10.47	0.00	0.47	10.94	.96	.66	790	624.6	95.5	-8.5
58.50	8.46	0.00	0.46	8.92	-17.05	.75	766	624.6	95.0	-9.0
58.75	7.69	0.00	0.46	8.15	.08	.79	755	624.7	94.5	-9.5
59.00	8.78	0.00	0.46	9.24	.03	.73	770	624.7	94.0	-10.0
59.25	10.08	0.00	0.46	10.54	-16.97	.68	786	624.8	93.5	-10.5
59.50	10.15	0.00	0.46	10.61	.97	.68	787	624.8	92.9	-11.0
59.75	10.53	0.00	0.46	10.99	.95	.65	791	624.9	92.4	-11.5
60.00	11.22	0.00	0.46	11.68	.91	.60	801	624.9	91.9	-12.0
60.25	12.74	0.00	0.46	13.20	.85	.54	816	625.0	91.4	-12.5
60.50	16.03	0.00	0.46	16.49	.75	.44	844	625.1	90.9	-13.0
60.75	19.00	0.00	0.46	19.46	.67	.36	865	625.1	90.4	-13.5
61.00	17.34	0.00	0.46	17.80	.72	.41	853	625.2	89.8	-14.0
61.25	14.44	0.00	0.46	14.90	.80	.50	830	625.3	89.3	-14.5
61.50	14.13	0.00	0.47	14.60	.82	.51	826	625.3	88.8	-15.0
61.75	13.83	0.00	0.47	14.30	.82	.52	824	625.4	88.3	-15.5
62.00	13.84	0.00	0.47	14.31	.82	.51	825	625.5	87.8	-16.0
62.25	13.55	0.00	0.47	14.02	.82	.51	824	625.6	87.3	-16.4
62.50	12.86	0.00	0.48	13.34	.85	.54	816	625.7	86.7	-16.9
62.75	12.17	0.00	0.48	12.65	.88	.58	809	625.7	86.2	-17.4
63.00	10.97	0.00	0.48	11.45	.92	.62	797	625.8	85.7	-17.9
63.25	10.50	0.00	0.48	10.98	.94	.64	792	625.9	85.2	-18.4
63.50	9.94	0.00	0.48	10.42	.96	.66	786	626.0	84.7	-18.9
63.75	9.60	0.00	0.48	10.08	.97	.67	782	626.1	84.2	-19.4
64.00	10.50	0.00	0.48	10.98	.93	.62	794	626.2	83.7	-19.9
64.25	11.10	0.00	0.48	11.58	.90	.59	802	626.3	83.1	-20.4
64.50	11.40	0.00	0.49	11.89	.89	.57	806	626.5	82.6	-20.9
64.75	12.44	0.00	0.49	12.93	.85	.53	817	626.6	82.1	-21.3
65.00	13.17	0.00	0.49	13.66	.82	.50	825	626.7	81.6	-21.8
65.25	13.19	0.00	0.49	13.68	.82	.51	824	626.8	81.1	-22.3
65.50	12.92	0.00	0.50	13.42	.83	.52	820	627.0	80.6	-22.8
65.75	12.34	0.00	0.50	12.84	.85	.54	815	627.1	80.1	-23.3
66.00	12.18	0.00	0.50	12.68	.86	.58	813	627.2	79.5	-23.8
66.25	10.17	0.00	0.50	10.67	.93	.95	792	627.4	79.0	-24.3
66.50	9.72	0.00	0.50	10.22	.95	.97	787	627.5	78.5	-24.7
66.75	9.60	0.00	0.50	10.10	.96	.98	784	627.7	78.0	-25.2
67.00	9.69	0.00	0.51	10.20	.96	.97	784	627.8	77.5	-25.7
67.25	9.90	0.00	0.51	10.41	.95	.97	787	628.0	77.0	-26.2

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38967.50	10.01	0.00	0.51	10.52	-16.95	-16.96	788	628.1	76.5	-26.7
67.75	10.14	0.00	0.52	10.66	.94	.95	790	628.3	76.0	-27.2
68.00	10.06	0.00	0.52	10.58	.95	.95	789	628.5	75.4	-27.6
68.25	10.31	0.00	0.52	10.83	.93	.94	792	628.6	74.9	-28.1
68.50	10.46	0.00	0.52	10.98	.92	.93	795	628.8	74.4	-28.6
68.75	10.62	0.00	0.53	11.15	.91	.92	798	629.0	73.9	-29.1
69.00	11.30	0.00	0.53	11.83	.88	.89	806	629.2	73.4	-29.6
69.25	12.82	0.00	0.54	13.36	.82	.83	823	629.4	72.9	-30.1
69.50	14.86	0.00	0.54	15.40	.76	.76	843	629.6	72.4	-30.5
69.75	12.67	0.00	0.54	13.21	.83	.83	822	629.8	71.8	-31.0
70.00	12.03	0.00	0.55	12.58	.85	.85	815	630.0	71.3	-31.5
70.25	13.42	0.00	0.55	13.97	.81	.81	828	630.2	70.8	-32.0
70.50	14.81	0.00	0.56	15.37	.76	.76	841	630.4	70.3	-32.5
70.75	14.39	0.00	0.56	14.95	.77	.77	838	630.7	69.8	-32.9
71.00	14.09	0.00	0.56	14.65	.78	.78	835	630.9	69.3	-33.4
71.25	11.82	0.00	0.57	12.39	.86	.86	813	631.1	68.8	-33.9
71.50	11.42	0.00	0.57	11.99	.88	.87	807	631.4	68.2	-34.4
71.75	11.33	0.00	0.58	11.91	.89	.88	806	631.6	67.7	-34.8
72.00	11.35	0.00	0.58	11.93	.89	.88	806	631.8	67.2	-35.3
72.25	11.26	0.00	0.58	11.84	.89	.88	806	632.1	66.7	-35.8
72.50	11.17	0.00	0.59	11.76	.89	.88	805	632.4	66.2	-36.3
72.75	11.19	0.00	0.60	11.79	.89	.88	805	632.6	65.7	-36.8
73.00	11.10	0.00	0.60	11.70	.89	.88	804	632.9	65.1	-37.2
73.25	10.81	0.00	0.60	11.41	.91	.89	801	633.2	64.6	-37.7
73.50	10.62	0.00	0.61	11.23	.91	.90	799	633.4	64.1	-38.2
73.75	10.64	0.00	0.62	11.26	.91	.89	799	633.7	63.6	-38.7
74.00	11.27	0.00	0.62	11.89	.88	.86	808	634.0	63.1	-39.1
74.25	12.42	0.00	0.63	13.05	.84	.81	821	634.3	62.5	-39.6
74.50	13.46	0.00	0.63	14.09	.81	.78	831	634.6	62.0	-40.1
74.75	14.80	0.00	0.64	15.44	.76	.73	845	634.9	61.5	-40.6
75.00	15.94	0.00	0.64	16.58	.73	.70	855	635.2	61.0	-41.0
75.25	16.04	0.00	0.65	16.69	.73	.70	855	635.5	60.5	-41.5
75.50	16.96	0.00	0.66	17.62	.71	.68	861	635.8	59.9	-42.0
75.75	16.43	0.00	0.66	17.09	.72	.69	857	636.2	59.4	-42.4
76.00	16.21	0.00	0.66	16.87	.73	.69	856	636.5	58.9	-42.9
76.25	14.84	0.00	0.67	15.51	.77	.73	845	636.8	58.4	-43.4
76.50	14.70	0.00	0.68	15.38	.77	.73	844	637.2	57.8	-43.9
76.75	14.05	0.00	0.68	14.73	.79	.74	839	637.5	57.3	-44.3
77.00	13.90	0.00	0.69	14.59	.79	.74	839	637.9	56.8	-44.8
77.25	13.95	0.00	0.69	14.64	.79	.74	839	638.2	56.3	-45.3
77.50	13.99	0.00	0.70	14.69	.79	.75	838	638.6	55.7	-45.7
77.75	13.91	0.00	0.71	14.62	.79	.74	838	639.0	55.2	-46.2
78.00	14.04	0.00	0.72	14.76	.79	.74	840	639.4	54.7	-46.7
78.25	14.05	0.00	0.73	14.78	.79	.73	840	639.7	54.1	-47.1
78.50	14.05	0.00	0.73	14.78	.79	.74	840	640.1	53.6	-47.6
78.75	13.94	0.00	0.74	14.68	.80	.74	839	640.5	53.1	-48.1
79.00	13.72	0.00	0.74	14.46	.80	.74	837	640.9	52.5	-48.5
79.25	13.68	0.00	0.75	14.43	.81	.74	837	641.3	52.0	-49.0
79.50	13.64	0.00	0.76	14.40	.80	.74	837	641.7	51.5	-49.5
79.75	13.79	0.00	0.77	14.56	.80	.73	840	642.1	50.9	-49.9
80.00	13.82	0.00	0.77	14.59	.80	.72	841	642.5	50.4	-50.4
80.25	13.95	0.00	0.78	14.73	.79	.72	843	643.0	49.8	-50.9
80.50	13.95	0.00	0.78	14.73	.79	.72	842	643.4	49.3	-51.3
80.75	14.25	0.00	0.79	15.04	.79	.71	844	643.8	48.7	-51.8
81.00	14.12	0.00	0.80	14.92	.79	.71	844	644.3	48.2	-52.3
81.25	14.19	0.00	0.80	14.99	.79	.71	844	644.7	47.6	-52.7
81.50	14.13	0.00	0.81	14.94	.80	.71	843	645.2	47.1	-53.2
81.75	13.95	0.00	0.82	14.77	.80	.71	843	645.6	46.5	-53.7
82.00	13.86	0.00	0.82	14.68	.80	.71	843	646.1	46.0	-54.1
82.25	13.76	0.00	0.83	14.59	.80	.71	841	646.6	45.4	-54.6

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_{γ} (°K)	z (km)	$\alpha_{\pi} - \alpha_{\odot}$ (deg)	$\delta_{\pi} - \delta_{\odot}$ (deg)
38982.50	13.53	0.26	0.84	14.63	-16.81	-16.72	841	647.0	44.9	-55.1
82.75	13.39	0.63	0.85	14.86	.80	.71	844	647.5	44.3	-55.5
83.00	13.84	0.94	0.86	15.64	.78	.69	851	648.0	43.8	-56.0
83.25	14.18	1.30	0.86	16.34	.76	.66	857	648.5	43.2	-56.4
83.50	12.94	1.59	0.87	15.40	.79	.69	849	649.0	42.6	-56.9
83.75	11.17	1.93	0.88	13.99	.83	.73	836	649.5	42.1	-57.4
84.00	10.68	2.22	0.88	13.78	.84	.74	834	650.0	41.5	-57.8
84.25	10.12	2.56	0.89	13.57	.85	.74	832	650.5	40.9	-58.3
84.50	9.36	2.82	0.90	13.08	.86	.75	827	651.0	40.3	-58.8
84.75	8.81	3.13	0.91	12.86	.87	.76	825	651.5	39.8	-59.2
85.00	8.37	3.42	0.92	12.71	.88	.77	823	652.0	39.2	-59.7
85.25	7.52	3.67	0.92	12.11	.90	.79	816	652.5	38.6	-60.1
85.50	7.08	3.91	0.93	11.92	.91	.80	815	653.1	38.0	-60.6
85.75	6.75	4.18	0.94	11.86	.91	.80	814	653.6	37.4	-61.0
86.00	6.73	4.47	0.94	12.14	.90	.78	817	654.1	36.8	-61.5
86.25	6.51	4.65	0.95	12.10	.91	.78	817	654.7	36.2	-62.0
86.50	6.60	4.83	0.96	12.39	.90	.77	820	655.2	35.6	-62.4
86.75	7.00	5.00	0.97	12.97	.88	.74	827	655.8	35.0	-62.9
87.00	6.79	5.17	0.98	12.93	.88	.75	827	656.3	34.4	-63.3
87.25	6.57	5.31	0.98	12.87	.88	.75	826	656.9	33.8	-63.8
87.50	6.26	5.44	0.99	12.69	.89	.76	825	657.5	33.2	-64.2
87.75	5.85	5.59	1.00	12.44	.90	.77	822	658.0	32.6	-64.7
88.00	5.75	5.73	1.01	12.49	.90	.76	822	658.6	32.0	-65.1
88.25	5.45	5.85	1.02	12.31	.91	.76	820	659.2	31.3	-65.6
88.50	5.25	5.96	1.02	12.23	.91	.77	820	659.7	30.7	-66.0
88.75	5.06	6.09	1.03	12.17	.92	.77	820	660.3	30.1	-66.5
89.00	4.86	6.17	1.04	12.07	.92	.77	818	660.9	29.4	-66.9
89.25	5.19	6.30	1.04	12.53	.91	.74	824	661.5	28.8	-67.4
89.50	6.35	6.39	1.05	13.79	.87	.70	838	662.1	28.1	-67.8
89.75	5.34	6.49	1.06	12.89	.90	.73	828	662.7	27.4	-68.3
90.00	4.02	6.59	1.06	11.67	.94	.78	814	663.3	26.8	-68.7
90.25	3.43	6.68	1.07	11.18	.96	.80	808	663.9	26.1	-69.2
90.50	3.77	6.79	1.08	11.63	.94	.79	816	664.5	25.4	-69.6
90.75	4.94	6.88	1.08	12.90	.90	.74	830	665.1	24.7	-70.1
91.00	6.62	6.96	1.09	14.68	.85	.66	849	665.7	24.0	-70.5
91.25	6.35	7.03	1.10	14.48	.85	.65	849	666.3	23.3	-71.0
91.50	5.88	7.11	1.10	14.09	.87	.67	844	666.9	22.6	-71.4
91.75	5.61	7.20	1.11	13.92	.87	.68	841	667.5	21.9	-71.9
92.00	5.55	7.27	1.12	13.94	.88	.68	841	668.1	21.2	-72.3
92.25	5.19	7.34	1.12	13.65	.89	.69	838	668.8	20.4	-72.7
92.50	5.03	7.41	1.12	13.56	.89	.70	838	669.4	19.7	-73.2
92.75	4.88	7.46	1.13	13.47	.90	.69	837	670.0	18.9	-73.6
93.00	4.52	7.52	1.14	13.18	.91	.70	834	670.6	18.1	-74.1
93.25	4.27	7.60	1.14	13.01	.91	.70	832	671.3	17.3	-74.5
93.50	3.91	7.63	1.15	12.70	.93	.71	828	671.9	16.5	-74.9
93.75	3.67	7.72	1.15	12.53	.93	.73	827	672.5	15.7	-75.4
94.00	3.22	7.76	1.16	12.13	.95	.75	825	673.2	14.9	-75.8
94.25	2.77	7.83	1.16	11.76	.96	.77	824	673.8	14.0	-76.2
94.50	1.70	7.88	1.17	10.75	-17.00	.81	808	674.4	13.2	-76.7
94.75	1.26	7.93	1.17	10.36	.02	.82	800	675.1	12.3	-77.1
95.00	0.92	7.97	1.18	10.06	.03	.83	795	675.7	11.4	-77.5
95.25	0.99	8.03	1.18	10.20	.03	.82	798	676.3	10.5	-77.9
95.50	1.38	8.06	1.19	10.63	.01	.81	808	677.0	9.5	-78.4
95.75	1.77	8.13	1.19	11.10	-16.99	.79	815	677.6	8.6	-78.8
96.00	2.27	8.15	1.20	11.62	.98	.75	817	678.3	7.6	-79.2
96.25	2.25	8.22	1.20	11.67	.98	.74	817	678.9	6.6	-79.6
96.50	1.82	8.25	1.20	11.27	-17.00	.76	811	679.5	5.6	-80.0
96.75	1.60	8.30	1.21	11.11	.00	.78	811	680.2	4.5	-80.5
97.00	1.59	8.34	1.21	11.14	.00	.78	815	680.8	3.4	-80.9
97.25	1.37	8.36	1.22	10.96	.01	.78	809	681.5	2.3	-81.3

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
38997.50	1.06	8.40	1.22	10.68	-17.03	-16.78	804	682.1	1.1	-81.7
97.75	0.74	8.45	1.22	10.41	.04	.80	802	682.7	359.9	-82.1
98.00	0.64	8.47	1.23	10.33	.04	.80	801	683.4	358.7	-82.5
98.25	0.43	8.49	1.24	10.16	.05	.81	797	684.0	357.4	-82.9
98.50	0.33	8.53	1.24	10.10	.06	.82	798	684.7	356.0	-83.3
98.75	0.23	8.55	1.24	10.02	.06	.82	799	685.3	354.6	-83.6
99.00	0.13	8.57	1.24	9.94	.06	.83	800	685.9	353.2	-84.0
99.25	-0.17	8.59	1.25	9.67	.07	.85	797	686.6	351.7	-84.4
99.50	-0.68	8.61	1.25	9.18	.10	.87	787	687.2	350.1	-84.8
99.75	-0.98	8.64	1.26	8.92	.11	.88	781	687.8	348.5	-85.1
39000.00	-0.97	8.65	1.26	8.95	.11	.87	781	688.5	346.8	-85.5
00.25	-1.05	8.67	1.26	8.87	.12	.87	778	689.1	345.0	-85.8
00.50	-1.14	8.68	1.27	8.80	.12	.88	780	689.7	343.1	-86.2
00.75	-1.23	8.69	1.27	8.73	.12	.89	782	690.3	341.2	-86.5
01.00	-1.41	8.70	1.28	8.56	.13	.90	780	691.0	339.1	-86.8
01.25	-1.29	8.72	1.28	8.71	.13	.89	781	691.6	336.9	-87.1
01.50	-1.37	8.74	1.28	8.65	.13	.89	778	692.2	334.6	-87.4
01.75	-1.55	8.75	1.28	8.48	.14	.90	777	692.8	332.2	-87.7
02.00	-1.41	8.76	1.28	8.62	.14	.89	777	693.4	329.7	-88.0
02.25	-1.28	8.77	1.28	8.77	.14	.87	775	694.0	327.0	-88.2
02.50	-1.46	8.77	1.28	8.59	.15	.88	772	694.6	324.2	-88.5
02.75	-1.73	8.78	1.28	8.33	.16	.90	771	695.2	321.2	-88.7
03.00	-1.80	8.78	1.28	8.26	.17	.90	769	695.8	318.1	-88.9
03.25	-1.46	8.79	1.28	8.62	.15	.88	773	696.4	314.9	-89.1
03.50	-1.11	8.79	1.28	8.96	.14	.85	777	697.0	311.4	-89.2
03.75	-0.76	8.80	1.28	9.32	.13	.84	785	697.6	307.9	-89.3
04.00	-0.82	8.80	1.28	9.26	.13	.85	788	698.2	304.2	-89.4
04.25	-1.19	8.80	1.28	8.89	.14	.87	783	698.7	300.3	-89.5
04.50	-1.35	8.80	1.28	8.73	.15	.88	780	699.3	296.4	-89.5
04.75	-1.51	8.80	1.28	8.57	.16	.89	779	699.9	292.4	-89.5
05.00	-1.67	8.80	1.28	8.41	.17	.90	775	700.4	288.3	-89.5
05.25	-1.72	8.80	1.28	8.36	.18	.89	771	701.0	284.2	-89.4
05.50	-1.77	8.80	1.28	8.31	.18	.90	771	701.5	280.1	-89.3
05.75	-1.93	8.80	1.28	8.16	.19	.91	769	702.0	276.0	-89.1
06.00	-1.87	8.80	1.28	8.21	.19	.91	771	702.6	272.0	-89.0
06.25	-2.12	8.79	1.28	7.95	.20	.93	768	703.1	268.1	-88.7
06.50	-2.07	8.77	1.28	7.98	.19	.93	772	703.6	264.3	-88.5
06.75	-2.01	8.76	1.27	8.02	.19	.93	773	704.1	260.6	-88.2
07.00	-1.95	8.75	1.27	8.07	.20	.92	769	704.6	257.0	-87.9
07.25	-1.78	8.74	1.27	8.23	.20	.89	766	705.1	253.6	-87.6
07.50	-1.20	8.72	1.27	8.78	.18	.86	774	705.6	250.3	-87.2
07.75	-0.83	8.70	1.26	9.13	.17	.83	780	706.0	247.2	-86.9
08.00	-0.87	8.68	1.26	9.07	.17	.84	779	706.5	244.2	-86.5
08.25	-1.21	8.67	1.26	8.71	.19	.86	774	706.9	241.4	-86.0
08.50	-1.35	8.65	1.26	8.57	.19	.87	773	707.4	238.7	-85.6
08.75	-1.48	8.64	1.26	8.42	.20	.89	772	707.8	236.2	-85.1
09.00	-1.52	8.58	1.25	8.32	.20	.89	771	708.2	233.8	-84.7
09.25	-1.55	8.57	1.25	8.28	.20	.90	770	708.6	231.5	-84.2
09.50	-1.78	8.55	1.24	8.01	.22	.91	765	709.0	229.3	-83.7
09.75	-1.71	8.54	1.24	8.07	.22	.90	764	709.4	227.3	-83.2
10.00	-1.94	8.51	1.24	7.81	.24	.91	754	709.8	225.3	-82.7
10.25	-2.27	8.47	1.24	7.43	.26	.94	748	710.2	223.4	-82.2
10.50	-2.30	8.45	1.24	7.39	.25	.95	752	710.5	221.6	-81.6
10.75	-2.42	8.43	1.23	7.23	.27	.96	746	710.8	219.9	-81.1
11.00	-2.55	8.38	1.23	7.07	.28	.96	739	711.1	218.3	-80.5
11.25	-2.57	8.35	1.23	7.02	.28	.97	740	711.4	216.8	-80.0
11.50	-2.59	8.34	1.22	6.98	.28	.98	743	711.7	215.3	-79.4
11.75	-2.60	8.32	1.22	6.94	.28	.99	745	712.0	213.8	-78.9
12.00	-2.62	8.28	1.21	6.87	.28	.99	744	712.3	212.4	-78.3
12.25	-2.64	8.25	1.21	6.82	.29	-17.00	742	712.5	211.1	-77.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39012.50	-2.86	8.23	1.20	6.57	-17.30	-17.01	735	712.8	209.8	-77.1
12.75	-2.87	8.20	1.20	6.53	.31	.02	735	713.0	208.6	-76.5
13.00	-2.99	8.14	1.19	6.35	.32	.03	729	713.2	207.4	-76.0
13.25	-3.00	8.12	1.19	6.32	.32	.03	728	713.5	206.2	-75.4
13.50	-2.90	8.07	1.18	6.35	.32	.03	729	713.7	205.1	-74.8
13.75	-3.02	8.04	1.18	6.20	.33	.04	725	713.8	204.0	-74.2
14.00	-2.92	8.01	1.17	6.26	.33	.04	726	714.0	203.0	-73.6
14.25	-3.13	7.94	1.16	5.97	.35	.06	717	714.2	201.9	-73.0
14.50	-3.24	7.92	1.16	5.84	.36	.07	713	714.3	200.9	-72.4
14.75	-3.15	7.86	1.15	5.87	.36	.07	711	714.5	199.9	-71.8
15.00	-2.74	7.83	1.15	6.24	.34	.04	721	714.6	199.0	-71.2
15.25	-2.64	7.80	1.14	6.30	.34	.01	713	714.7	198.1	-70.5
15.50	-2.64	7.73	1.13	6.22	.35	.02	711	714.8	197.1	-69.9
15.75	-2.33	7.70	1.12	6.49	.32	.02	729	714.9	196.3	-69.3
16.00	-2.23	7.64	1.12	6.53	.33	.01	724	714.9	195.4	-68.7
16.25	-2.23	7.61	1.11	6.49	.33	.00	718	715.0	194.5	-68.1
16.50	-2.23	7.57	1.10	6.44	.33	.02	723	715.0	193.7	-67.5
16.75	-2.33	7.52	1.09	6.28	.33	.04	726	715.1	192.9	-66.9
17.00	-2.23	7.50	1.08	6.35	.33	.04	728	715.1	192.1	-66.2
17.25	-2.43	7.42	1.07	6.06	.35	.06	719	715.1	191.3	-65.6
17.50	-2.53	7.40	1.06	5.93	.35	.07	717	715.1	190.5	-65.0
17.75	-2.63	7.34	1.06	5.77	.37	.09	712	715.1	189.7	-64.4
18.00	-2.52	7.30	1.05	5.83	.36	.08	711	715.1	189.0	-63.7
39048.25	5.76	-0.31	0.03	5.48	-17.36	-17.13	588	688.1	123.0	13.9
48.50	5.68	-0.33	0.02	5.37	.37	.14	572	687.8	122.5	14.5
48.75	5.90	-0.34	0.02	5.58	.35	.12	602	687.5	122.0	15.1
49.00	6.01	-0.41	0.02	5.62	.34	.12	607	687.2	121.5	15.8
49.25	6.42	-0.42	0.01	6.02	.31	.09	628	686.9	121.0	16.4
49.50	6.73	-0.44	0.01	6.30	.29	.07	637	686.6	120.5	17.1
49.75	6.61	-0.46	0.00	6.15	.30	.08	627	686.3	120.0	17.7
50.00	6.59	-0.47	0.00	6.12	.30	.08	623	686.0	119.5	18.3
50.25	6.66	-0.50	0.00	6.16	.30	.08	626	685.7	119.0	19.0
50.50	6.42	-0.51	-0.01	5.90	.31	.10	615	685.4	118.5	19.6
50.75	6.59	-0.52	-0.01	6.05	.30	.09	614	685.1	118.0	20.3
51.00	6.95	-0.52	-0.02	6.41	.28	.06	627	684.8	117.5	20.9
51.25	7.62	-0.52	-0.02	7.08	.24	.01	646	684.6	117.0	21.5
51.50	7.46	-0.52	-0.02	6.91	.25	.01	631	684.3	116.5	22.2
51.75	7.70	-0.51	-0.02	7.17	.23	.00	648	684.0	116.0	22.8
52.00	7.73	-0.50	-0.03	7.20	.22	.01	655	683.7	115.5	23.4
52.25	7.75	-0.44	-0.04	7.28	.21	.01	662	683.5	114.9	24.1
52.50	8.08	-0.41	-0.04	7.63	.20	-16.98	667	683.2	114.4	24.7
52.75	8.20	-0.37	-0.04	7.79	.19	.96	666	683.0	113.9	25.3
53.00	8.20	-0.30	-0.04	7.86	.18	.96	670	682.7	113.4	26.0
53.25	7.69	-0.23	-0.05	7.41	.20	-17.00	660	682.5	112.9	26.6
53.50	6.96	-0.18	-0.06	6.72	.24	.04	636	682.2	112.4	27.2
53.75	6.85	-0.09	-0.06	6.69	.24	.04	634	682.0	111.9	27.9
54.00	6.73	0.00	-0.06	6.67	.25	.04	630	681.7	111.4	28.5
54.25	6.92	0.03	-0.07	6.88	.23	.02	636	681.5	110.9	29.1
54.50	7.51	0.03	-0.07	7.47	.19	-16.99	657	681.3	110.4	29.8
54.75	7.68	0.02	-0.07	7.63	.18	.98	663	681.1	109.9	30.4
55.00	7.65	0.00	-0.08	7.57	.18	.98	663	680.9	109.3	31.0
55.25	8.22	0.00	-0.08	8.14	.15	.95	674	680.7	108.8	31.7
55.50	9.93	0.00	-0.08	9.85	.08	.85	707	680.5	108.3	32.3
55.75	10.60	0.00	-0.08	10.52	.05	.81	717	680.3	107.8	32.9
56.00	13.33	0.00	-0.08	13.25	-16.95	.70	756	680.1	107.3	33.6
56.25	14.51	0.00	-0.08	14.43	.91	.66	769	679.9	106.8	34.2
56.50	14.24	0.00	-0.08	14.16	.92	.67	766	679.8	106.3	34.8
56.75	14.47	0.00	-0.08	14.39	.91	.65	769	679.6	105.7	35.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39057.00	13.68	0.00	-0.08	13.60	-16.93	-16.68	761	679.5	105.2	36.1
57.25	13.19	0.00	-0.08	13.11	.95	.69	755	679.3	104.7	36.7
57.50	13.00	0.00	-0.08	12.92	.95	.70	752	679.2	104.2	37.3
57.75	13.12	0.00	-0.08	13.04	.94	.70	753	679.0	103.7	38.0
58.00	13.65	0.00	-0.08	13.57	.93	.68	759	678.9	103.1	38.6
58.25	13.14	0.00	-0.07	13.07	.94	.70	753	678.8	102.6	39.2
58.50	12.83	0.00	-0.07	12.76	.95	.71	748	678.7	102.1	39.8
58.75	12.94	0.00	-0.07	12.87	.94	.71	749	678.6	101.6	40.5
59.00	12.83	0.00	-0.06	12.77	.95	.71	747	678.4	101.0	41.1
59.25	12.31	0.00	-0.06	12.25	.96	.73	740	678.3	100.5	41.7
59.50	11.78	0.00	-0.06	11.72	.98	.75	732	678.3	100.0	42.3
59.75	11.67	0.00	-0.06	11.61	.98	.77	732	678.2	99.4	43.0
60.00	11.65	0.00	-0.06	11.59	.98	.77	732	678.1	98.9	43.6
60.25	11.83	0.00	-0.05	11.78	.97	.75	733	678.0	98.4	44.2
60.50	12.12	0.00	-0.05	12.07	.96	.74	737	678.0	97.8	44.8
60.75	12.81	0.00	-0.04	12.77	.94	.71	746	677.9	97.3	45.5
61.00	13.09	0.00	-0.04	13.05	.93	.70	749	677.9	96.7	46.1
61.25	13.06	0.00	-0.03	13.03	.93	.69	749	677.8	96.2	46.7
61.50	13.85	0.00	-0.03	13.82	.90	.66	758	677.8	95.7	47.3
61.75	14.64	0.00	-0.02	14.62	.87	.64	767	677.7	95.1	47.9
62.00	14.49	0.00	-0.02	14.47	.88	.64	765	677.7	94.6	48.6
62.25	13.93	0.00	-0.02	13.91	.89	.67	758	677.7	94.0	49.2
62.50	13.17	0.00	-0.01	13.16	.91	.70	750	677.7	93.5	49.8
62.75	12.40	0.00	-0.01	12.39	.93	.73	740	677.7	92.9	50.4
39072.75	15.06	0.00	0.31	15.37	-16.81	-16.60	768	681.6	68.2	74.7
73.00	14.37	0.00	0.32	14.69	.83	.61	759	681.7	67.5	75.3
73.25	13.37	0.00	0.32	13.69	.87	.64	746	681.9	66.8	75.9
73.50	12.38	0.00	0.33	12.71	.90	.67	732	682.1	66.0	76.5
73.75	11.90	0.00	0.33	12.23	.91	.70	725	682.3	65.3	77.1
74.00	11.83	0.00	0.34	12.17	.91	.70	725	682.5	64.5	77.7
74.25	11.77	0.00	0.35	12.12	.91	.71	725	682.7	63.7	78.3
74.50	11.81	0.00	0.36	12.11	.91	.70	726	682.9	62.9	78.9
74.75	12.16	0.00	0.36	12.52	.89	.69	731	683.1	62.1	79.5
75.00	12.20	0.00	0.37	12.57	.89	.69	731	683.3	61.3	80.0
75.25	12.22	0.00	0.38	12.60	.89	.69	731	683.6	60.5	80.6
75.50	12.25	0.00	0.38	12.63	.89	.69	731	683.8	59.6	81.2
75.75	12.47	0.00	0.39	12.86	.89	.67	734	684.0	58.8	81.8
76.00	12.48	0.00	0.40	12.88	.89	.67	732	684.2	57.9	82.4
76.25	12.57	0.00	0.41	12.98	.88	.67	734	684.4	57.0	82.9
76.50	12.54	0.00	0.41	12.95	.88	.67	735	684.7	56.1	83.5
76.75	12.71	0.00	0.42	13.13	.88	.66	736	684.9	55.2	84.1
77.00	12.86	0.00	0.42	13.28	.88	.65	737	685.1	54.2	84.7
77.25	12.90	0.00	0.42	13.32	.88	.65	736	685.4	53.3	85.2
77.50	13.13	0.00	0.43	13.56	.87	.64	740	685.6	52.3	85.8
77.75	13.24	0.00	0.44	13.68	.86	.65	743	685.9	51.2	86.4
78.00	13.34	0.00	0.44	13.78	.86	.63	741	686.1	50.2	86.9
78.25	14.46	0.00	0.45	14.91	.83	.60	757	686.4	49.1	87.5
78.50	14.13	0.00	0.46	14.59	.83	.62	756	686.6	48.0	88.0
78.75	13.38	0.00	0.46	13.84	.85	.65	746	686.9	46.9	88.6
79.00	13.12	0.00	0.46	13.58	.86	.65	742	687.1	45.7	89.1
79.25	12.66	0.00	0.47	13.13	.88	.67	734	687.4	44.5	89.7
79.50	12.39	0.00	0.48	12.87	.89	.68	731	687.7	43.3	90.2
79.75	12.00	0.00	0.48	12.48	.89	.70	727	687.9	42.0	90.8
80.00	11.82	0.00	0.48	12.30	.90	.70	723	688.2	40.7	91.3
80.25	11.72	0.00	0.49	12.21	.91	.70	721	688.5	39.3	91.8
80.50	11.62	0.00	0.50	12.12	.91	.71	720	688.7	37.9	92.4
80.75	11.72	0.00	0.50	12.22	.91	.71	722	689.0	36.4	92.9
81.00	11.50	0.00	0.50	12.00	.91	.71	718	689.3	34.8	93.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39081.25	11.48	0.00	0.51	11.99	-16.92	-16.71	716	689.6	33.2	93.9
81.50	11.66	0.00	0.52	12.18	.91	.70	717	689.9	31.5	94.4
81.75	11.73	0.00	0.52	12.25	.91	.70	719	690.2	29.8	94.9
82.00	11.90	0.00	0.52	12.42	.90	.70	724	690.5	27.9	95.4
82.25	12.26	0.00	0.53	12.79	.89	.68	727	690.7	26.0	95.9
82.50	12.11	0.00	0.54	12.65	.90	.68	723	691.0	24.0	96.3
82.75	11.95	0.00	0.54	12.49	.90	.69	722	691.3	21.9	96.8
83.00	11.89	0.00	0.54	12.43	.91	.69	720	691.6	19.6	97.3
83.25	12.44	-0.02	0.54	12.96	.89	.67	728	692.0	17.3	97.7
83.50	14.84	-0.02	0.54	15.36	.82	.59	761	692.3	14.8	98.1
83.75	15.08	-0.03	0.54	15.58	.82	.58	762	692.6	12.2	98.5
84.00	14.07	-0.05	0.55	14.57	.85	.62	750	692.9	9.5	98.9
84.25	13.89	-0.05	0.55	14.39	.86	.62	747	693.2	6.6	99.3
84.50	14.01	0.82	0.55	15.39	.83	.59	758	693.5	3.6	99.6
84.75	12.89	1.46	0.56	14.92	.85	.60	752	693.8	0.4	100.0
85.00	11.67	1.93	0.56	14.16	.87	.63	742	694.2	357.1	100.3
85.25	10.55	2.35	0.56	13.46	.89	.65	732	694.5	353.6	100.6
85.50	9.95	2.69	0.56	13.20	.90	.66	728	694.8	350.0	100.8
85.75	9.55	2.98	0.56	13.08	.90	.67	729	695.1	346.3	101.0
86.00	8.94	3.24	0.56	12.74	.91	.69	726	695.5	342.4	101.2
86.25	8.44	3.50	0.56	12.49	.91	.70	722	695.8	338.5	101.4
86.50	8.04	3.71	0.56	12.30	.92	.70	720	696.2	334.5	101.5
86.75	7.84	3.91	0.56	12.32	.92	.71	722	696.5	330.4	101.6
87.00	7.75	4.07	0.56	12.38	.92	.71	724	696.8	326.3	101.7
87.25	7.35	4.23	0.56	12.14	.93	.72	721	697.2	322.2	101.7
87.50	6.85	4.38	0.56	11.80	.94	.73	716	697.5	318.1	101.7
87.75	6.66	4.50	0.56	11.72	.94	.74	716	697.9	314.1	101.7
88.00	6.48	4.61	0.55	11.64	.95	.74	713	698.2	310.2	101.6
88.25	5.98	4.75	0.55	11.28	.96	.75	705	698.6	306.4	101.5
88.50	5.91	4.85	0.54	11.30	.96	.75	705	698.9	302.7	101.4
88.75	6.14	4.94	0.55	11.63	.95	.74	712	699.3	299.1	101.2
89.00	6.28	5.01	0.55	11.84	.95	.73	715	699.7	295.7	101.0
89.25	6.11	5.12	0.54	11.76	.95	.73	714	700.0	292.5	100.8
89.50	5.74	5.18	0.54	11.46	.96	.75	710	700.4	289.4	100.6
89.75	5.68	5.25	0.54	11.47	.96	.75	710	700.7	286.4	100.3
90.00	5.63	5.32	0.54	11.49	.97	.74	708	701.1	283.6	100.0
90.25	5.89	5.40	0.54	11.83	.95	.73	715	701.5	280.9	99.7
90.50	5.85	5.44	0.54	11.83	.95	.73	717	701.9	278.4	99.4
90.75	5.71	5.49	0.54	11.74	.96	.74	716	702.2	275.9	99.1
91.00	5.68	5.52	0.54	11.75	.96	.74	717	702.6	273.6	98.8
91.25	5.87	5.56	0.54	11.97	.95	.73	721	703.0	271.5	98.4
91.50	5.75	5.60	0.54	11.89	.96	.73	720	703.3	269.4	98.0
91.75	5.75	5.62	0.53	11.89	.96	.73	720	703.7	267.4	97.7
92.00	5.65	5.64	0.53	11.81	.96	.73	718	704.1	265.5	97.3
92.25	5.55	5.65	0.53	11.73	.97	.74	717	704.5	263.7	96.9
92.50	5.47	5.66	0.53	11.66	.97	.75	719	704.8	261.9	96.5
92.75	5.40	5.67	0.52	11.58	.97	.75	718	705.2	260.3	96.1
93.00	5.33	5.70	0.52	11.55	.98	.75	716	705.6	258.7	95.7
93.25	5.38	5.71	0.52	11.61	.98	.75	718	706.0	257.2	95.3
93.50	5.43	5.72	0.52	11.68	.97	.74	720	706.3	255.7	94.9
93.75	5.40	5.72	0.51	11.63	.98	.75	720	706.7	254.3	94.4
94.00	5.48	5.72	0.51	11.71	.98	.74	721	707.1	252.9	94.0
94.25	5.57	5.72	0.50	11.79	.98	.74	723	707.5	251.6	93.6
94.50	5.77	5.71	0.50	11.98	.97	.74	727	707.8	250.3	93.1
94.75	5.68	5.70	0.50	11.88	.98	.73	721	708.2	249.1	92.7
95.00	5.59	5.69	0.49	11.77	-17.00	.73	712	708.6	247.9	92.2
95.25	5.65	5.68	0.48	11.81	-16.99	.73	717	708.9	246.7	91.8
95.50	5.62	5.67	0.48	11.76	.99	.74	720	709.3	245.6	91.3
95.75	6.20	5.66	0.48	12.34	.98	.71	727	709.7	244.5	90.9
96.00	6.88	5.64	0.47	12.99	.96	.68	734	710.0	243.4	90.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39096.25	6.64	5.63	0.46	12.73	-16.97	-16.69	732	710.4	242.4	89.9
96.50	6.19	5.62	0.46	12.27	.98	.72	730	710.8	241.3	89.5
96.75	5.85	5.57	0.46	11.88	.99	.74	727	711.1	240.3	89.0
97.00	5.50	5.54	0.45	11.50	-17.01	.76	721	711.5	239.4	88.5
97.25	5.36	5.52	0.44	11.33	.01	.77	720	711.8	238.4	88.1
97.50	5.33	5.50	0.44	11.27	.02	.77	722	712.2	237.5	87.6
97.75	4.99	5.46	0.43	10.88	.03	.79	715	712.6	236.5	87.1
98.00	4.64	5.43	0.42	10.49	.05	.81	707	712.9	235.6	86.6
98.25	4.51	5.39	0.42	10.32	.06	.81	703	713.2	234.8	86.1
98.50	4.89	5.33	0.41	10.63	.05	.79	709	713.6	233.9	85.7
98.75	5.58	5.30	0.40	11.28	.03	.77	721	713.9	233.0	85.2
99.00	5.34	5.25	0.40	10.99	.05	.77	713	714.3	232.2	84.7
99.25	4.90	5.22	0.39	10.51	.06	.80	707	714.6	231.4	84.2
99.50	4.87	5.18	0.38	10.42	.06	.81	711	714.9	230.5	83.7
99.75	4.63	5.13	0.38	10.13	.08	.83	707	715.3	229.7	83.2
39100.00	4.50	5.09	0.37	9.96	.09	.84	704	715.6	229.0	82.7
00.25	4.26	5.04	0.36	9.66	.10	.85	698	715.9	228.2	82.2
00.50	4.03	4.99	0.35	9.37	.11	.86	692	716.2	227.4	81.7
00.75	4.21	4.94	0.34	9.48	.11	.86	696	716.5	226.6	81.3
01.00	4.39	4.89	0.34	9.61	.11	.85	700	716.8	225.9	80.8
01.25	4.36	4.83	0.33	9.52	.11	.85	698	717.1	225.1	80.3
01.50	4.44	4.78	0.32	9.54	.11	.85	698	717.4	224.4	79.8
01.75	4.51	4.73	0.31	9.55	.11	.85	701	717.7	223.7	79.3
02.00	4.39	4.68	0.30	9.36	.12	.87	700	718.0	222.9	78.8
02.25	4.36	4.62	0.30	9.29	.13	.87	699	718.3	222.2	78.3
02.50	4.45	4.57	0.29	9.31	.13	.87	701	718.6	221.5	77.7
02.75	4.42	4.51	0.28	9.21	.13	.87	699	718.9	220.8	77.2
03.00	4.61	4.47	0.27	9.35	.13	.86	701	719.1	220.1	76.7
03.25	4.49	4.41	0.26	9.15	.14	.87	696	719.4	219.4	76.2
03.50	4.47	4.35	0.26	9.08	.15	.88	697	719.7	218.7	75.7
03.75	4.65	4.29	0.25	9.20	.14	.87	700	719.9	218.1	75.2
04.00	4.64	4.23	0.24	9.11	.15	.88	700	720.2	217.4	74.7
04.25	4.62	4.18	0.23	9.03	.15	.88	701	720.4	216.7	74.2
04.50	4.61	4.09	0.22	8.92	.16	.89	700	720.6	216.0	73.7
04.75	4.69	4.04	0.21	8.94	.16	.89	701	720.9	215.4	73.2
05.00	4.89	3.96	0.20	9.04	.16	.87	697	721.1	214.7	72.7
05.25	5.18	3.88	0.19	9.26	.16	.86	700	721.3	214.1	72.1
05.50	5.48	3.83	0.18	9.49	.14	.85	712	721.5	213.4	71.6
05.75	5.47	3.76	0.17	9.40	.14	.86	715	721.7	212.8	71.1
06.00	5.46	3.69	0.16	9.31	.15	.87	713	721.9	212.1	70.6
06.25	5.66	3.62	0.15	9.43	.15	.86	714	722.1	211.5	70.1
06.50	5.76	3.55	0.14	9.44	.15	.86	718	722.3	210.9	69.5
06.75	5.75	3.48	0.13	9.36	.15	.87	719	722.5	210.2	69.0
07.00	5.54	3.41	0.12	9.07	.17	.88	712	722.7	209.6	68.5
07.25	5.23	3.34	0.10	8.67	.19	.90	703	722.8	209.0	68.0
07.50	5.12	3.27	0.09	8.48	.20	.91	700	723.0	208.4	67.5
07.75	5.12	3.18	0.08	8.38	.20	.92	700	723.1	207.7	66.9
08.00	4.81	3.12	0.07	8.00	.22	.94	694	723.3	207.1	66.4
08.25	4.60	3.04	0.06	7.70	.24	.97	689	723.4	206.5	65.9
08.50	4.61	2.95	0.04	7.60	.25	.97	689	723.5	205.9	65.4
08.75	4.61	2.89	0.03	7.53	.25	.98	688	723.7	205.3	64.8
09.00	4.31	2.82	0.02	7.15	.28	-17.00	677	723.8	204.7	64.3
09.25	4.31	2.75	0.01	7.07	.28	.01	676	723.9	204.1	63.8
09.50	4.22	2.68	0.00	6.90	.29	.02	673	724.0	203.5	63.2
09.75	4.23	2.60	-0.01	6.82	.30	.03	672	724.1	202.9	62.7
10.00	4.24	2.51	-0.02	6.72	.31	.03	671	724.2	202.3	62.2
10.25	4.25	2.41	-0.04	6.62	.31	.04	669	724.3	201.7	61.7
10.50	4.16	2.33	-0.05	6.44	.33	.05	664	724.3	201.1	61.1
10.75	4.07	2.24	-0.06	6.26	.34	.06	660	724.4	200.5	60.6
11.00	4.09	2.17	-0.08	6.18	.35	.07	659	724.4	199.9	60.1

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39111.25	4.31	2.08	-0.09	6.30	-17.34	-17.06	665	724.5	199.3	59.5
11.50	4.23	1.99	-0.10	6.12	.35	.08	659	724.5	198.7	59.0
11.75	4.56	1.92	-0.11	6.37	.34	.06	669	724.6	198.2	58.5
12.00	4.68	1.85	-0.12	6.41	.33	.05	672	724.6	197.6	57.9
12.25	4.60	1.76	-0.13	6.24	.35	.07	668	724.6	197.0	57.4
12.50	4.84	1.68	-0.15	6.37	.34	.05	668	724.6	196.4	56.8
12.75	4.97	1.60	-0.16	6.40	.35	.04	658	724.6	195.8	56.3
13.00	5.51	1.51	-0.17	6.85	.33	.00	672	724.6	195.3	55.8
39113.50	5.65	1.36	-0.20	6.81	-17.32	-17.02	687	724.6	194.1	54.7
14.00	5.56	1.18	-0.22	6.52	.34	.05	685	724.5	193.0	53.6
14.50	5.45	1.01	-0.24	6.22	.36	.07	679	724.5	191.8	52.5
15.00	5.45	0.84	-0.27	6.02	.37	.09	675	724.3	190.7	51.4
15.50	5.57	0.66	-0.30	5.93	.38	.09	675	724.2	189.6	50.3
16.00	5.67	0.49	-0.32	5.84	.39	.11	677	724.0	188.4	49.2
16.50	5.88	0.31	-0.35	5.84	.39	.10	676	723.8	187.3	48.1
17.00	5.98	0.16	-0.37	5.77	.40	.11	672	723.6	186.2	47.1
39122.00	8.59	-1.65	-0.63	6.31	-17.38	-17.06	713	720.2	175.1	35.9
22.50	8.82	-1.85	-0.65	6.32	.39	.05	709	719.7	174.0	34.8
23.00	8.98	-1.99	-0.68	6.31	.39	.05	713	719.3	173.0	33.7
23.50	9.14	-2.17	-0.70	6.27	.39	.06	720	718.8	171.9	32.6
24.00	9.05	-2.37	-0.73	5.95	.41	.08	711	718.3	170.8	31.4
24.50	9.00	-2.57	-0.75	5.69	.43	.10	705	717.8	169.7	30.3
25.00	8.85	-2.75	-0.77	5.34	.45	.14	702	717.3	168.6	29.2
25.50	8.75	-2.91	-0.80	5.04	.47	.17	696	716.8	167.5	28.0
26.00	8.66	-3.10	-0.82	4.74	.50	.20	684	716.2	166.4	26.9
39139.00	12.59	-6.88	-1.20	4.51	-17.49	-17.16	714	699.8	138.1	-3.3
39.25	13.19	-6.93	-1.20	5.06	.44	.11	735	699.4	137.6	-3.8
39.50	12.29	-6.98	-1.20	4.10	.53	.20	695	699.1	137.0	-4.4
39.75	12.35	-7.02	-1.20	4.14	.53	.18	696	698.8	136.5	-5.0
40.00	13.08	-7.06	-1.20	4.82	.46	.11	725	698.4	135.9	-5.6
40.25	13.54	-7.10	-1.20	5.24	.42	.06	739	698.1	135.4	-6.2
39140.50	13.68	-7.12	-1.20	5.36	-17.41	-17.04	744	697.8	134.8	-6.8
41.00	14.75	-7.20	-1.20	6.35	.33	-16.97	772	697.1	133.7	-8.0
41.50	15.47	-7.27	-1.19	7.02	.28	.93	788	696.5	132.6	-9.2
42.00	14.93	-7.31	-1.18	6.44	.32	.95	777	695.8	131.4	-10.4
42.50	14.77	-7.34	-1.18	6.25	.32	.95	774	695.1	130.3	-11.5
43.00	15.58	-7.39	-1.18	7.01	.27	.90	791	694.5	129.2	-12.7
43.50	16.57	-7.41	-1.17	7.99	.20	.83	809	693.9	128.0	-13.9
44.00	17.26	-7.41	-1.17	8.67	.16	.79	821	693.2	126.9	-15.1
44.50	17.81	-7.43	-1.16	9.21	.13	.75	830	692.6	125.7	-16.3
45.00	18.77	-7.42	-1.16	10.18	.08	.70	844	692.0	124.6	-17.5
45.50	20.28	-7.40	-1.15	11.73	.00	.62	865	691.4	123.4	-18.7
46.00	21.50	-7.37	-1.14	12.99	-16.94	.56	882	690.8	122.2	-19.9
46.50	23.21	-7.31	-1.14	14.76	.88	.50	898	690.2	121.1	-21.1
47.00	23.80	-7.20	-1.13	15.47	.85	.48	905	689.7	119.9	-22.3
47.50	22.75	-7.11	-1.12	14.52	.87	.50	899	689.1	118.7	-23.5
48.00	22.70	-6.99	-1.11	14.59	.86	.50	900	688.6	117.5	-24.7
48.50	21.19	-6.87	-1.10	13.22	.91	.55	886	688.0	116.2	-25.9
49.00	20.54	-6.69	-1.08	12.77	.92	.57	880	687.5	115.0	-27.1
49.50	19.79	-6.50	-1.07	12.21	.94	.58	876	687.0	113.8	-28.3
50.00	18.98	-6.28	-1.06	11.63	.95	.60	871	686.5	112.5	-29.5
50.50	18.22	-6.03	-1.04	11.14	.97	.62	865	686.1	111.2	-30.7
51.00	17.73	-5.72	-1.02	10.99	.97	.63	863	685.6	109.9	-31.9
51.50	17.18	-5.38	-1.00	10.80	.98	.63	861	685.2	108.6	-33.1

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{p}$	$10^7 \dot{p}_s$	$10^7 \dot{p}_t$	$-10^7 \dot{p}_n$	$\log p_0$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39152.00	15.94	-4.93	-0.98	10.03	-17.00	-16.65	855	684.8	107.3	-34.3
52.50	14.25	-4.31	-0.96	8.98	.06	.72	838	684.4	106.0	-35.5
53.00	13.15	-3.55	-0.94	8.66	.08	.76	831	684.1	104.6	-36.7
53.50	11.12	-2.57	-0.92	7.63	.13	.81	816	683.7	103.2	-37.9
54.00	9.96	-1.36	-0.89	7.72	.11	.78	819	683.4	101.8	-39.1
54.50	9.09	0.07	-0.86	8.30	.07	.75	830	683.1	100.3	-40.3
55.00	8.63	0.06	-0.84	7.85	.10	.79	821	682.8	98.8	-41.5
55.50	8.16	0.03	-0.81	7.38	.13	.82	813	682.6	97.3	-42.7
56.00	8.01	0.00	-0.78	7.23	.14	.83	810	682.4	95.7	-43.8
56.50	7.78	0.00	-0.76	7.02	.15	.84	806	682.2	94.1	-45.0
57.00	7.32	0.00	-0.73	6.59	.17	.86	798	682.0	92.4	-46.2
57.50	7.15	0.00	-0.70	6.45	.18	.87	795	681.9	90.7	-47.4
58.00	7.27	0.00	-0.68	6.59	.17	.87	798	681.8	88.9	-48.5
58.50	7.75	0.00	-0.65	7.10	.13	.83	808	681.7	87.0	-49.7
59.00	7.80	0.00	-0.62	7.18	.12	.81	810	681.7	85.1	-50.9
59.50	7.91	0.00	-0.59	7.32	.11	.79	813	681.6	83.0	-52.0
39159.75	9.01	0.00	-0.59	8.42	-17.04	-16.72	832	681.6	82.0	-52.6
60.00	9.29	0.00	-0.56	8.73	.02	.69	839	681.6	80.9	-53.2
60.25	9.81	0.00	-0.53	9.28	-16.99	.67	846	681.7	79.8	-53.7
60.50	10.46	0.00	-0.50	9.96	.96	.64	854	681.7	78.6	-54.3
60.75	10.95	0.00	-0.47	10.48	.94	.62	860	681.7	77.4	-54.9
61.00	11.48	0.00	-0.44	11.04	.92	.59	867	681.8	76.2	-55.4
61.25	11.94	0.00	-0.40	11.54	.89	.57	874	681.8	74.9	-56.0
61.50	11.93	0.00	-0.37	11.56	.89	.57	874	681.9	73.6	-56.5
61.75	11.55	0.00	-0.34	11.21	.90	.58	870	682.0	72.2	-57.1
62.00	12.07	0.00	-0.44	11.63	.89	.56	875	682.0	70.8	-57.6
62.25	11.91	0.00	-0.42	11.49	.89	.57	873	682.1	69.4	-58.2
62.50	10.94	0.00	-0.40	10.54	.94	.61	860	682.2	67.8	-58.7
62.75	10.18	0.00	-0.39	9.79	.98	.66	849	682.3	66.2	-59.2
63.00	10.04	0.00	-0.37	9.67	.99	.67	846	682.4	64.6	-59.8
63.25	9.81	0.00	-0.36	9.45	-17.00	.68	844	682.6	62.8	-60.3
63.50	9.58	0.00	-0.34	9.24	.01	.69	840	682.7	61.0	-60.8
63.75	8.42	0.00	-0.32	8.10	.07	.75	823	682.8	59.1	-61.3
64.00	7.27	0.00	-0.31	6.96	.14	.82	803	683.0	57.1	-61.8
64.25	6.85	0.00	-0.29	6.56	.16	.84	795	683.1	55.0	-62.3
64.50	6.63	0.00	-0.28	6.35	.18	.87	790	683.3	52.8	-62.8
64.75	6.93	0.00	-0.26	6.67	.16	.83	797	683.4	50.5	-63.2
65.00	8.27	0.00	-0.24	8.03	.07	.75	821	683.6	48.1	-63.7
65.25	8.27	0.00	-0.23	8.04	.08	.76	820	683.8	45.5	-64.1
65.50	8.78	0.00	-0.21	8.57	.06	.73	827	684.0	42.8	-64.5
65.75	9.20	0.00	-0.19	9.01	.04	.72	833	684.2	40.0	-64.9
66.00	9.31	0.00	-0.18	9.13	.03	.71	834	684.5	37.0	-65.3
66.25	9.32	0.00	-0.16	9.16	.03	.70	835	684.7	33.8	-65.7
66.50	9.34	0.00	-0.14	9.20	.02	.69	836	684.9	30.5	-66.0
66.75	9.66	0.00	-0.13	9.53	.01	.68	840	685.2	27.1	-66.3
67.00	9.89	0.00	-0.11	9.78	.00	.66	844	685.4	23.5	-66.6
67.25	10.52	0.00	-0.09	10.43	-16.97	.63	853	685.7	19.8	-66.9
67.50	11.06	0.00	-0.08	10.98	.95	.60	859	686.0	15.9	-67.1
67.75	12.11	0.00	-0.06	12.05	.91	.56	870	686.2	12.0	-67.3
68.00	12.24	0.00	-0.04	12.20	.90	.55	872	686.5	8.0	-67.5
68.25	12.16	0.00	-0.02	12.14	.91	.56	871	686.8	3.9	-67.6
68.50	11.46	0.00	0.00	11.46	.94	.59	861	687.1	359.8	-67.7
68.75	10.15	0.00	0.01	10.16	-17.00	.67	843	687.4	355.7	-67.8
69.00	9.87	0.00	0.03	9.90	.02	.69	839	687.7	351.6	-67.8
69.25	9.07	0.00	0.04	9.11	.05	.71	829	688.0	347.6	-67.8
69.50	9.00	0.00	0.06	9.06	.05	.71	829	688.3	343.6	-67.8
69.75	9.03	0.00	0.08	9.11	.06	.71	828	688.7	339.8	-67.7
70.00	9.05	0.00	0.10	9.15	.06	.71	828	689.0	336.1	-67.6
70.25	9.08	0.00	0.11	9.19	.06	.73	828	689.3	332.5	-67.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{p}$	$10^7 \dot{p}_s$	$10^7 \dot{p}_t$	$-10^7 \dot{p}_a$	$\log \rho_G$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39170.50	9.00	0.00	0.12	9.12	-17.07	-16.73	826	689.7	329.1	-67.3
70.75	8.62	0.00	0.14	8.76	.09	.74	821	690.0	325.8	-67.1
71.00	7.41	0.00	0.16	7.57	.15	.81	801	690.4	322.7	-66.9
71.25	7.74	0.00	0.17	7.91	.14	.80	806	690.7	319.7	-66.7
71.50	7.97	0.00	0.19	8.16	.13	.79	810	691.1	316.9	-66.5
71.75	8.30	0.00	0.20	8.50	.11	.76	814	691.5	314.2	-66.2
72.00	8.42	0.00	0.22	8.64	.10	.74	817	691.9	311.7	-65.9
72.25	8.64	0.00	0.23	8.87	.09	.72	820	692.2	309.3	-65.7
72.50	8.76	0.00	0.25	9.01	.09	.72	821	692.6	307.0	-65.4
72.75	8.77	0.00	0.27	9.04	.10	.74	820	693.0	304.8	-65.0
73.00	8.68	0.00	0.28	8.96	.10	.75	818	693.4	302.7	-64.7
73.25	8.27	0.00	0.30	8.57	.13	.77	812	693.8	300.7	-64.4
73.50	7.35	0.00	0.32	7.67	.18	.83	796	694.2	298.9	-64.1
73.75	7.25	0.00	0.33	7.58	.18	.82	794	694.6	297.1	-63.7
74.00	7.15	0.00	0.34	7.49	.19	.82	792	695.0	295.3	-63.3
74.25	7.15	0.00	0.36	7.51	.19	.82	791	695.4	293.7	-63.0
74.50	7.04	0.00	0.37	7.41	.20	.83	788	695.8	292.1	-62.6
74.75	6.82	0.00	0.39	7.21	.22	.86	784	696.2	290.6	-62.2
75.00	6.50	0.00	0.40	6.90	.24	.89	777	696.6	289.2	-61.9
75.25	5.96	0.00	0.42	6.38	.28	.92	764	697.0	287.8	-61.5
75.50	8.51	0.00	0.43	8.94	.13	.76	811	697.4	286.4	-61.1
75.75	16.71	0.00	0.44	17.15	-16.85	.46	896	697.8	285.1	-60.7
76.00	17.19	0.00	0.46	17.65	.83	.43	900	698.2	283.9	-60.3
76.25	14.07	0.00	0.47	14.54	.92	.51	875	698.6	282.7	-59.9
76.50	11.97	0.00	0.48	12.45	.99	.58	854	699.0	281.5	-59.5
76.75	10.69	0.00	0.49	11.18	-17.04	.64	839	699.5	280.3	-59.1
77.00	9.30	0.00	0.50	9.80	.11	.72	819	699.9	279.2	-58.7
77.25	8.94	0.00	0.51	9.45	.13	.75	814	700.3	278.2	-58.3
77.50	8.36	0.00	0.52	8.88	.16	.78	805	700.7	277.1	-57.9
77.75	6.85	0.00	0.53	7.38	.24	.86	777	701.1	276.1	-57.5
78.00	6.16	0.00	0.54	6.70	.28	.92	763	701.5	275.1	-57.0
78.25	7.21	0.00	0.55	7.76	.22	.86	785	702.0	274.1	-56.6
78.50	8.87	0.00	0.56	9.43	.14	.77	811	702.4	273.2	-56.2
78.75	9.70	0.00	0.57	10.27	.11	.70	821	702.8	272.3	-55.8
79.00	10.73	0.00	0.58	11.31	.06	.64	835	703.3	271.4	-55.4
79.25	12.17	0.00	0.58	12.75	.02	.59	850	703.7	270.5	-54.9
79.50	13.39	0.00	0.59	13.98	-16.98	.54	862	704.1	269.6	-54.5
79.75	11.31	0.00	0.60	11.91	-17.05	.62	840	704.6	268.7	-54.1
80.00	9.64	0.00	0.61	10.25	.12	.69	818	705.0	267.9	-53.7
80.25	9.30	0.00	0.62	9.92	.14	.71	812	705.4	267.1	-53.2
80.50	9.05	0.00	0.62	9.67	.15	.72	808	705.9	266.3	-52.8
80.75	8.69	0.00	0.63	9.32	.17	.75	801	706.3	265.5	-52.4
81.00	8.33	0.00	0.64	8.97	.19	.77	794	706.7	264.7	-51.9
81.25	7.95	0.00	0.65	8.60	.21	.79	787	707.2	263.9	-51.5
81.50	7.05	0.00	0.66	7.71	.26	.86	770	707.6	263.2	-51.1
81.75	5.94	0.00	0.66	6.60	.33	.93	744	708.1	262.4	-50.6
82.00	5.44	0.00	0.67	6.11	.37	.97	729	708.5	261.7	-50.2
82.25	5.24	0.00	0.68	5.92	.38	-17.01	726	709.0	261.0	-49.8
82.50	5.43	-0.01	0.68	6.10	.36	.01	735	709.5	260.2	-49.3
82.75	5.52	-0.01	0.69	6.20	.36	.00	738	709.9	259.5	-48.9
83.00	5.49	-0.01	0.70	6.18	.36	.01	735	710.4	258.8	-48.5
83.25	5.35	-0.02	0.71	6.04	.38	.01	728	710.8	258.1	-48.0
83.50	5.31	-0.03	0.71	5.99	.38	.01	724	711.3	257.5	-47.6
83.75	5.04	-0.04	0.72	5.72	.40	.03	716	711.8	256.8	-47.1
84.00	4.67	-0.06	0.73	5.34	.43	.07	705	712.2	256.1	-46.7
84.25	4.39	-0.07	0.74	5.05	.45	.11	694	712.7	255.4	-46.3
84.50	4.09	-0.08	0.74	4.75	.48	.13	679	713.2	254.8	-45.8
84.75	3.68	0.78	0.75	5.22	.44	.09	699	713.7	254.1	-45.4
85.00	3.06	1.49	0.75	5.30	.44	.09	702	714.1	253.5	-44.9
85.25	2.43	2.09	0.76	5.27	.44	.09	698	714.6	252.8	-44.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{p}$	$10^7 \dot{p}_s$	$10^7 \dot{p}_t$	$-10^7 \dot{p}_a$	$\log p_0$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_0$ (deg)	$\delta_\pi - \delta_0$ (deg)
39185.50	1.98	2.54	0.76	5.28	-17.45	-17.08	694	715.1	252.2	-44.1
85.75	1.53	2.92	0.77	5.23	.45	.09	692	715.6	251.6	-43.6
86.00	0.45	3.27	0.77	4.49	.52	.16	658	716.1	251.0	-43.2
86.25	-0.13	3.57	0.78	4.22	.54	.20	642	716.6	250.3	-42.7
86.50	-0.31	3.84	0.78	4.31	.53	.19	649	717.1	249.7	-42.3
86.75	-0.50	4.09	0.78	4.37	.53	.18	649	717.5	249.1	-41.8
87.00	-0.40	4.27	0.78	4.65	.51	.15	659	718.0	248.5	-41.4
87.25	0.00	4.43	0.78	5.21	.46	.10	683	718.5	247.9	-41.0
87.50	-0.12	4.57	0.78	5.23	.47	.09	678	719.0	247.3	-40.5
87.75	0.56	4.70	0.78	6.04	.41	.02	707	719.6	246.7	-40.1
88.00	-0.01	4.82	0.78	5.60	.45	.06	687	720.1	246.1	-39.6
88.25	-0.28	4.94	0.78	5.44	.46	.07	675	720.6	245.5	-39.2
88.50	-0.15	5.03	0.78	5.66	.44	.06	692	721.1	244.9	-38.7
88.75	0.27	5.11	0.78	6.16	.40	.04	719	721.6	244.4	-38.3
89.00	-0.14	5.18	0.78	5.82	.43	.06	700	722.1	243.8	-37.8
89.25	-0.98	5.24	0.78	5.04	.50	.11	654	722.6	243.2	-37.4
89.50	-1.22	5.28	0.78	4.85	.51	.14	651	723.2	242.6	-36.9
89.75	-1.26	5.32	0.78	4.84	.50	.16	665	723.7	242.1	-36.5
90.00	-1.01	5.36	0.78	5.12	.48	.13	678	724.2	241.5	-36.0
39256.25	21.88	-1.38	-0.31	20.19	-16.50	-16.49	877	632.1	335.3	56.3
56.50	22.56	-0.95	-0.30	21.31	.48	.46	884	632.2	333.9	55.8
56.75	23.83	-0.63	-0.28	22.92	.44	.42	895	632.3	332.5	55.2
57.00	24.77	-0.33	-0.26	24.17	.40	.39	905	632.3	331.1	54.7
57.25	24.45	-0.10	-0.24	24.10	.41	.39	904	632.4	329.8	54.2
57.50	23.18	0.00	-0.23	22.95	.44	.42	896	632.5	328.5	53.6
57.75	22.92	0.00	-0.21	22.71	.45	.43	894	632.6	327.3	53.1
58.00	22.64	0.00	-0.20	22.44	.45	.43	893	632.7	326.1	52.6
58.25	22.54	0.00	-0.18	22.36	.45	.43	894	632.8	324.9	52.0
58.50	22.52	0.00	-0.16	22.36	.45	.43	895	632.9	323.8	51.5
58.75	22.58	0.00	-0.15	22.43	.45	.43	895	633.0	322.7	50.9
59.00	22.01	0.00	-0.13	21.88	.47	.45	890	633.1	321.7	50.4
59.25	21.41	0.00	-0.12	21.29	.49	.47	885	633.3	320.6	49.8
59.50	21.11	0.00	-0.10	21.01	.50	.48	882	633.4	319.6	49.3
59.75	21.20	0.00	-0.08	21.12	.50	.48	882	633.5	318.6	48.7
60.00	21.48	0.00	-0.07	21.41	.50	.48	884	633.7	317.7	48.1
60.25	21.53	0.00	-0.05	21.48	.50	.48	885	633.8	316.7	47.6
60.50	21.78	0.00	-0.04	21.74	.50	.47	886	634.0	315.8	47.0
60.75	21.90	0.00	-0.02	21.88	.50	.47	887	634.1	314.9	46.5
61.00	21.70	0.00	-0.01	21.69	.50	.47	886	634.3	314.0	45.9
61.25	21.49	0.00	0.01	21.50	.51	.48	885	634.5	313.2	45.3
61.50	21.47	0.00	0.03	21.50	.51	.48	885	634.6	312.3	44.8
61.75	23.18	0.00	0.04	23.22	.47	.44	895	634.8	311.5	44.2
62.00	25.69	0.00	0.06	25.75	.42	.39	910	635.0	310.7	43.6
62.25	28.92	0.00	0.07	28.99	.37	.34	926	635.2	309.8	43.1
62.50	28.54	0.00	0.09	28.63	.38	.34	924	635.4	309.0	42.5
62.75	28.25	0.00	0.10	28.35	.39	.36	920	635.6	308.3	41.9
63.00	27.75	0.00	0.12	27.87	.41	.37	918	635.8	307.5	41.4
63.25	27.23	0.00	0.14	27.37	.41	.37	917	636.0	306.7	40.8
63.50	26.40	0.00	0.15	26.55	.43	.39	912	636.2	306.0	40.2
63.75	24.95	0.00	0.17	25.12	.47	.42	903	636.4	305.2	39.7
64.00	24.41	0.00	0.18	24.59	.48	.44	899	636.6	304.5	39.1
64.25	24.07	0.00	0.20	24.27	.49	.44	897	636.9	303.8	38.5
64.50	23.62	0.00	0.22	23.84	.50	.46	894	637.1	303.0	38.0
64.75	23.06	0.00	0.23	23.29	.52	.47	890	637.3	302.3	37.4
65.00	23.01	0.00	0.25	23.26	.52	.47	891	637.5	301.6	36.8
65.25	23.26	0.00	0.26	23.52	.51	.46	894	637.8	300.9	36.2
65.50	21.56	0.00	0.28	21.84	.55	.49	886	638.0	300.2	35.7
65.75	21.29	0.00	0.30	21.59	.55	.49	886	638.3	299.6	35.1

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_S$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_0$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39266.00	21.83	0.00	0.32	22.15	-16.53	-16.47	891	638.5	298.9	34.5
66.25	22.48	0.00	0.33	22.81	.52	.46	895	638.8	298.2	34.0
66.50	23.33	0.00	0.35	23.68	.52	.46	897	639.0	297.6	33.4
66.75	23.25	0.00	0.36	23.61	.52	.46	896	639.3	296.9	32.8
67.00	23.38	0.00	0.38	23.76	.52	.46	896	639.5	296.2	32.2
67.25	23.40	0.00	0.40	23.80	.53	.46	896	639.8	295.6	31.7
67.50	22.10	0.00	0.41	22.51	.55	.49	889	640.1	294.9	31.1
67.75	20.48	0.00	0.42	20.90	.58	.51	882	640.4	294.3	30.5
68.00	19.90	0.00	0.44	20.34	.59	.52	880	640.6	293.7	29.9
68.25	19.41	0.00	0.45	19.86	.61	.54	875	640.9	293.0	29.4
68.50	19.55	0.00	0.47	20.02	.62	.55	874	641.2	292.4	28.8
68.75	20.92	0.00	0.48	21.40	.60	.52	881	641.5	291.8	28.2
69.00	20.44	0.00	0.50	20.94	.61	.53	878	641.8	291.2	27.7
69.25	20.08	0.00	0.51	20.59	.63	.55	875	642.1	290.5	27.1
69.50	18.69	0.00	0.52	19.21	.66	.58	866	642.4	289.9	26.5
69.75	17.82	0.00	0.54	18.36	.69	.60	860	642.7	289.3	25.9
70.00	17.16	0.00	0.55	17.71	.70	.62	857	643.0	288.7	25.4
70.25	16.31	0.00	0.57	16.88	.72	.64	852	643.3	288.1	24.8
70.50	15.97	0.00	0.58	16.55	.74	.65	849	643.6	287.5	24.2
70.75	17.59	0.00	0.60	18.19	.70	.61	860	643.9	286.9	23.6
71.00	21.16	0.00	0.61	21.77	.62	.52	882	644.2	286.3	23.1
71.25	27.31	0.00	0.62	27.93	.51	.41	914	644.5	285.7	22.5
39271.40	29.95	0.00	0.62	30.57	-16.47	-16.37	925	644.7	285.4	22.1
71.50	33.79	0.00	0.63	34.42	.41	.31	943	644.8	285.1	21.9
71.60	43.40	0.00	0.64	44.04	.29	.19	982	645.0	284.9	21.7
71.70	75.43	0.00	0.64	76.07	.03	-15.93	1069	645.1	284.7	21.5
71.80	63.27	0.00	0.65	63.92	.10	-16.00	1045	645.2	284.4	21.2
71.90	47.27	0.00	0.65	47.92	.23	.13	1000	645.3	284.2	21.0
72.00	56.25	0.00	0.65	56.90	.16	.06	1025	645.5	284.0	20.8
72.10	47.30	0.00	0.66	47.96	.23	.13	1001	645.6	283.7	20.5
72.20	34.51	0.00	0.66	35.17	.37	.27	957	645.7	283.5	20.3
72.30	31.96	0.00	0.67	32.63	.42	.32	941	645.9	283.3	20.1
39272.50	31.23	0.00	0.68	31.91	-16.47	-16.36	929	646.1	282.8	19.6
72.75	22.28	0.00	0.69	22.97	.63	.53	884	646.5	282.2	19.0
73.00	17.64	0.00	0.70	18.34	.74	.63	857	646.8	281.6	18.5
73.25	15.07	0.00	0.72	15.79	.80	.69	840	647.2	281.1	17.9
73.50	14.27	0.00	0.72	14.99	.83	.71	834	647.5	280.5	17.3
73.75	13.85	0.00	0.74	14.59	.84	.73	831	647.9	279.9	16.7
74.00	14.75	0.00	0.75	15.50	.81	.70	839	648.2	279.4	16.2
74.25	15.22	0.00	0.76	15.98	.81	.69	842	648.6	278.8	15.6
74.50	14.97	0.00	0.77	15.74	.83	.71	838	648.9	278.2	15.0
74.75	13.06	0.00	0.78	13.84	.89	.76	823	649.3	277.7	14.4
75.00	11.14	0.00	0.79	11.93	.95	.82	806	649.7	277.1	13.9
75.25	10.74	0.00	0.79	11.53	.97	.84	802	650.0	276.5	13.3
75.50	12.89	0.00	0.80	13.69	.90	.77	821	650.4	276.0	12.7
75.75	14.52	0.00	0.81	15.33	.85	.72	835	650.8	275.4	12.1
76.00	16.66	0.00	0.81	17.47	.79	.65	852	651.2	274.9	11.6
39276.20	19.03	0.00	0.82	19.85	-16.73	-16.59	870	651.5	274.4	11.1
76.40	26.83	0.00	0.82	27.65	.57	.43	913	651.8	274.0	10.7
76.60	31.28	0.00	0.83	32.11	.50	.36	934	652.2	273.5	10.2
76.80	27.71	0.00	0.84	28.55	.56	.41	919	652.5	273.1	9.7
39276.90	28.48	0.00	0.84	29.32	-16.55	-16.40	923	652.7	272.9	9.5
77.00	33.42	0.00	0.84	34.26	.47	.32	947	652.8	272.6	9.3
77.10	40.92	0.00	0.84	41.76	.38	.23	975	653.0	272.4	9.1
77.20	31.77	0.00	0.85	32.62	.49	.34	940	653.1	272.2	8.8
77.30	27.10	0.00	0.85	27.95	.57	.41	919	653.3	272.0	8.6

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39277.40	22.42	0.00	0.86	23.28	-16.66	-16.51	892	653.5	271.8	8.4
77.50	20.31	0.00	0.86	21.17	.72	.56	877	653.6	271.5	8.1
39277.75	17.32	0.00	0.86	18.18	-16.80	-16.65	854	654.1	271.0	7.6
78.00	15.30	0.00	0.87	16.17	.86	.71	840	654.5	270.4	7.0
78.25	13.99	0.00	0.88	14.87	.90	.75	830	654.9	269.9	6.4
78.50	12.78	0.00	0.88	13.66	.93	.78	821	655.3	269.4	5.8
78.75	12.18	0.00	0.88	13.06	.95	.78	819	655.8	268.8	5.3
39279.00	11.87	0.00	0.89	12.76	-16.96	-16.80	815	656.2	268.3	4.7
79.50	11.02	0.00	0.90	11.92	-17.01	.84	805	657.1	267.2	3.6
80.00	10.27	0.00	0.91	11.18	.04	.87	798	658.0	266.1	2.4
80.50	9.65	0.00	0.92	10.57	.07	.90	790	658.9	265.0	1.3
81.00	9.30	0.00	0.92	10.22	.09	.92	786	659.8	263.9	0.1
81.50	8.55	0.00	0.93	9.48	.13	.95	777	660.7	262.9	-1.0
82.00	7.64	0.00	0.93	8.57	.18	.99	764	661.7	261.8	-2.1
82.50	6.60	1.45	0.93	8.98	.16	.98	770	662.6	260.7	-3.3
83.00	5.61	2.45	0.93	9.00	.17	.97	770	663.6	259.7	-4.4
83.50	4.74	3.14	0.93	8.81	.18	.98	768	664.5	258.6	-5.5
84.00	3.90	3.71	0.93	8.53	.20	.99	763	665.5	257.5	-6.7
84.50	3.08	4.07	0.93	8.08	.22	-17.02	756	666.5	256.5	-7.8
85.00	2.28	4.37	0.93	7.58	.25	.06	749	667.4	255.4	-8.9
85.50	1.48	4.59	0.92	6.99	.29	.10	738	668.4	254.3	-10.0
86.00	0.79	4.79	0.92	6.50	.33	.12	726	669.4	253.3	-11.2
86.50	0.30	4.91	0.92	6.12	.35	.15	717	670.4	252.2	-12.3
87.00	0.10	5.01	0.91	6.02	.36	.16	716	671.3	251.2	-13.4
87.50	0.20	5.11	0.90	6.21	.35	.14	722	672.3	250.1	-14.5
88.00	0.05	5.14	0.89	6.08	.36	.15	716	673.3	249.1	-15.6
88.50	0.14	5.20	0.88	6.22	.36	.13	717	674.2	248.0	-16.7
89.00	0.50	5.20	0.87	6.57	.33	.10	727	675.2	247.0	-17.8
89.50	1.30	5.17	0.86	7.33	.29	.06	746	676.2	245.9	-18.9
90.00	2.00	5.13	0.85	7.98	.25	.02	761	677.1	244.9	-20.0
39306.50	7.94	-0.27	0.14	7.80	-17.25	-16.97	749	700.5	209.3	-56.6
07.00	8.11	-0.46	0.12	7.77	.25	.97	748	700.7	208.2	-57.7
07.50	8.17	-0.67	0.09	7.60	.26	.97	743	701.0	207.0	-58.7
08.00	8.39	-0.87	0.06	7.58	.25	.98	743	701.2	205.9	-59.8
08.50	8.60	-1.08	0.03	7.56	.25	.98	744	701.4	204.7	-60.9
09.00	8.79	-1.26	0.00	7.53	.25	.98	741	701.5	203.6	-62.0
09.50	8.97	-1.47	-0.03	7.47	.25	.98	738	701.6	202.4	-63.0
10.00	9.20	-1.66	-0.05	7.49	.24	.98	741	701.6	201.2	-64.1
39310.25	9.28	-1.77	-0.07	7.43	-17.25	-16.98	739	701.6	200.6	-64.6
10.50	9.92	-1.87	-0.08	7.97	.22	.95	753	701.6	200.0	-65.1
10.75	10.45	-1.97	-0.10	8.38	.20	.91	756	701.6	199.4	-65.7
11.00	10.68	-2.07	-0.11	8.50	.20	.89	753	701.6	198.8	-66.2
11.25	10.60	-2.16	-0.13	8.31	.21	.90	750	701.6	198.2	-66.7
11.50	10.83	-2.26	-0.14	8.43	.19	.91	757	701.5	197.6	-67.3
11.75	10.85	-2.36	-0.15	8.34	.19	.92	759	701.5	197.0	-67.8
12.00	10.67	-2.43	-0.17	8.07	.20	.93	752	701.4	196.4	-68.3
12.25	10.49	-2.54	-0.18	7.77	.22	.94	743	701.4	195.8	-68.8
12.50	10.10	-2.63	-0.20	7.27	.25	.97	728	701.3	195.2	-69.4
12.75	10.12	-2.72	-0.22	7.18	.25	.97	725	701.2	194.6	-69.9
13.00	10.04	-2.82	-0.23	6.99	.26	.99	720	701.1	193.9	-70.4
13.25	10.06	-2.91	-0.25	6.90	.27	.99	716	701.0	193.3	-70.9
13.50	10.29	-3.01	-0.26	7.02	.26	.98	721	700.9	192.7	-71.5
13.75	10.51	-3.11	-0.28	7.12	.25	.98	725	700.8	192.0	-72.0
14.00	10.74	-3.19	-0.29	7.26	.24	.97	728	700.7	191.4	-72.5
14.25	11.17	-3.29	-0.31	7.57	.23	.94	732	700.5	190.7	-73.0

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39314.50	12.42	-3.37	-0.32	8.73	-17.17	-16.86	757	700.4	190.1	-73.5
14.75	13.16	-3.47	-0.34	9.36	.14	.82	771	700.2	189.4	-74.1
15.00	13.70	-3.55	-0.35	9.80	.12	.80	780	700.1	188.8	-74.6
15.25	16.38	-3.64	-0.37	12.37	.02	.68	824	699.9	188.1	-75.1
15.50	20.29	-3.74	-0.38	16.17	-16.90	.55	871	699.7	187.4	-75.6
15.75	15.61	-3.83	-0.40	11.37	-17.05	.72	808	699.5	186.7	-76.1
16.00	14.50	-3.90	-0.41	10.19	.09	.78	788	699.3	186.1	-76.6
16.25	13.81	-4.00	-0.42	9.39	.13	.81	772	699.1	185.4	-77.2
16.50	14.55	-4.10	-0.44	10.01	.10	.77	784	698.9	184.7	-77.7
16.75	15.09	-4.19	-0.45	10.45	.08	.76	793	698.7	184.0	-78.2
17.00	14.70	-4.27	-0.46	9.97	.09	.79	785	698.4	183.3	-78.7
17.25	14.52	-4.37	-0.48	9.67	.10	.81	780	698.2	182.5	-79.2
17.50	14.14	-4.46	-0.49	9.19	.12	.83	771	698.0	181.8	-79.7
17.75	14.27	-4.53	-0.51	9.23	.11	.84	774	697.7	181.1	-80.2
18.00	14.50	-4.62	-0.52	9.36	.10	.83	777	697.5	180.3	-80.7
18.25	15.14	-4.72	-0.54	9.88	.09	.79	784	697.2	179.6	-81.2
18.50	16.30	-4.79	-0.55	10.95	.04	.73	803	696.9	178.8	-81.7
18.75	16.02	-4.89	-0.57	10.56	.05	.76	797	696.6	178.0	-82.2
19.00	15.64	-4.96	-0.58	10.10	.06	.79	791	696.4	177.2	-82.7
19.25	15.26	-5.04	-0.59	9.63	.08	.82	784	696.1	176.4	-83.2
19.50	14.88	-5.12	-0.61	9.16	.10	.84	776	695.8	175.6	-83.7
19.75	14.30	-5.20	-0.62	8.48	.13	.88	761	695.5	174.8	-84.2
20.00	14.03	-5.27	-0.64	8.12	.14	.89	753	695.1	174.0	-84.7
20.25	13.65	-5.39	-0.65	7.62	.17	.92	739	694.8	173.1	-85.2
20.50	13.99	-5.45	-0.66	7.88	.15	.90	745	694.5	172.2	-85.7
20.75	14.13	-5.54	-0.68	7.91	.15	.90	746	694.2	171.4	-86.2
21.00	14.38	-5.61	-0.68	8.09	.14	.89	751	693.9	170.4	-86.7
21.25	15.03	-5.69	-0.70	8.64	.11	.86	766	693.5	169.5	-87.2
21.50	15.27	-5.76	-0.72	8.79	.09	.86	771	693.2	168.6	-87.7
21.75	15.62	-5.84	-0.73	9.05	.08	.84	775	692.8	167.6	-88.1
22.00	15.87	-5.93	-0.74	9.20	.08	.82	775	692.5	166.6	-88.6
22.25	16.22	-5.98	-0.75	9.48	.06	.80	780	692.1	165.6	-89.1
22.50	16.57	-6.07	-0.76	9.74	.05	.80	789	691.7	164.6	-89.6
22.75	16.72	-6.14	-0.77	9.81	.04	.80	791	691.4	163.5	-90.0
23.00	16.97	-6.21	-0.79	9.97	.03	.78	793	691.0	162.5	-90.5
23.25	17.43	-6.28	-0.80	10.34	.02	.75	798	690.6	161.3	-91.0
23.50	17.58	-6.35	-0.81	10.42	.02	.74	799	690.3	160.2	-91.4
23.75	17.73	-6.42	-0.82	10.49	.01	.75	802	689.9	159.0	-91.9
24.00	17.68	-6.48	-0.83	10.37	.01	.76	801	689.5	157.8	-92.4
24.25	17.63	-6.56	-0.84	10.24	.01	.76	799	689.1	156.5	-92.8
24.50	17.38	-6.61	-0.85	9.92	.02	.78	794	688.7	155.2	-93.3
24.75	17.03	-6.68	-0.87	9.48	.04	.80	785	688.3	153.8	-93.7
25.00	16.58	-6.73	-0.88	8.96	.06	.82	775	687.9	152.4	-94.1
25.25	16.54	-6.79	-0.89	8.86	.06	.83	774	687.5	151.0	-94.6
25.50	16.70	-6.87	-0.90	8.93	.06	.82	775	687.1	149.4	-95.0
25.75	16.97	-6.92	-0.91	9.14	.05	.81	779	686.7	147.8	-95.4
26.00	17.55	-6.97	-0.92	9.65	.02	.79	790	686.3	146.2	-95.8
26.25	18.23	-7.04	-0.93	10.26	-16.99	.76	802	685.8	144.4	-96.3
26.50	18.61	-7.10	-0.94	10.57	.98	.74	807	685.4	142.6	-96.6
26.75	18.88	-7.16	-0.95	10.77	.97	.73	812	685.0	140.7	-97.0
27.00	19.26	-7.21	-0.96	11.09	.95	.72	818	684.6	138.7	-97.4
27.25	19.64	-7.28	-0.97	11.40	.94	.70	821	684.1	136.6	-97.8
27.50	19.82	-7.31	-0.98	11.54	.94	.68	823	683.7	134.4	-98.2
27.75	20.11	-7.37	-0.98	11.76	.93	.68	827	683.3	132.1	-98.5
28.00	21.01	-7.41	-0.99	12.61	.89	.65	839	682.8	129.7	-98.8
28.25	21.09	-7.46	-1.00	12.63	.89	.64	840	682.4	127.1	-99.1
28.50	20.77	-7.52	-1.01	12.24	.90	.67	835	682.0	124.4	-99.4
28.75	20.75	-7.57	-1.02	12.17	.90	.68	835	681.5	121.5	-99.7
29.00	20.95	-7.62	-1.03	12.30	.90	.66	836	681.1	118.5	-100.0
29.25	21.04	-7.66	-1.04	12.34	.89	.66	837	680.6	115.3	-100.2

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39329.50	21.24	-7.72	-1.05	12.47	-16.89	-16.66	839	680.2	112.0	-100.4
29.75	21.33	-7.76	-1.05	12.53	.88	.65	840	679.8	108.5	-100.6
30.00	21.84	-7.81	-1.06	12.97	.87	.64	846	679.3	104.9	-100.8
30.25	22.15	-7.85	-1.07	13.23	.86	.62	849	678.9	101.1	-100.9
30.50	22.05	-7.90	-1.08	13.06	.86	.63	847	678.4	97.3	-101.0
30.75	21.95	-7.93	-1.08	12.93	.86	.64	846	678.0	93.3	-101.1
31.00	21.85	-7.97	-1.09	12.80	.87	.64	844	677.5	89.2	-101.1
31.25	21.35	-8.02	-1.10	12.23	.89	.66	836	677.1	85.0	-101.1
31.50	20.65	-8.05	-1.10	11.50	.91	.69	826	676.6	80.9	-101.1
31.75	20.87	-8.07	-1.11	11.69	.90	.68	829	676.1	76.7	-101.0
32.00	21.50	-8.12	-1.12	12.26	.88	.66	837	675.7	72.6	-100.9
32.25	22.44	-8.15	-1.12	13.16	.85	.62	850	675.2	68.5	-100.8
32.50	22.97	-8.18	-1.12	13.67	.83	.60	856	674.8	64.6	-100.6
32.75	23.71	-8.22	-1.13	14.37	.81	.58	865	674.3	60.7	-100.4
33.00	26.09	-8.25	-1.13	16.72	.74	.51	890	673.9	57.0	-100.1
33.25	29.19	-8.27	-1.14	19.79	.66	.44	918	673.4	53.4	-99.9
33.50	29.84	-8.30	-1.14	20.40	.65	.42	923	672.9	49.9	-99.6
33.75	29.88	-8.32	-1.15	20.41	.64	.41	924	672.5	46.6	-99.2
34.00	28.08	-8.34	-1.15	18.58	.68	.46	908	672.0	43.5	-98.9
34.25	28.02	-8.35	-1.16	18.50	.68	.47	907	671.5	40.5	-98.5
34.50	29.29	-8.35	-1.16	19.78	.65	.43	918	671.1	37.7	-98.1
34.75	29.24	-8.37	-1.17	19.69	.65	.44	917	670.6	35.0	-97.7
35.00	29.29	-8.38	-1.17	19.73	.65	.44	917	670.2	32.4	-97.3
35.25	29.34	-8.39	-1.18	19.77	.65	.44	917	669.7	30.0	-96.9
35.50	28.79	-8.40	-1.18	19.20	.66	.46	912	669.2	27.7	-96.4
35.75	28.34	-8.41	-1.18	18.74	.67	.47	907	668.8	25.5	-95.9
36.00	28.40	-8.43	-1.19	18.79	.67	.47	908	668.3	23.5	-95.5
36.25	28.35	-8.44	-1.19	18.73	.67	.47	907	667.8	21.5	-95.0
36.50	28.07	-8.44	-1.19	18.44	.67	.47	906	667.4	19.6	-94.5
36.75	27.66	-8.44	-1.20	18.03	.68	.48	902	666.9	17.8	-94.0
37.00	27.35	-8.44	-1.20	17.71	.69	.50	899	666.5	16.1	-93.5
37.25	27.33	-8.45	-1.20	17.68	.69	.50	898	666.0	14.5	-93.0
37.50	28.01	-8.45	-1.20	18.37	.67	.48	904	665.5	12.9	-92.4
37.75	28.99	-8.46	-1.20	19.33	.65	.46	912	665.1	11.4	-91.9
38.00	28.52	-8.46	-1.20	18.86	.66	.47	908	664.6	9.9	-91.4
38.25	28.45	-8.45	-1.20	18.80	.65	.47	909	664.1	8.6	-90.8
38.50	28.26	-8.44	-1.20	18.63	.66	.47	906	663.7	7.2	-90.3
38.75	27.76	-8.41	-1.20	18.15	.67	.49	901	663.2	5.9	-89.7
39.00	27.14	-8.39	-1.20	17.55	.68	.51	896	662.8	4.7	-89.2
39.25	26.82	-8.38	-1.20	17.24	.69	.52	893	662.3	3.4	-88.6
39.50	26.80	-8.37	-1.20	17.23	.69	.52	892	661.9	2.3	-88.1
39.75	26.66	-8.36	-1.20	17.10	.70	.53	890	661.4	1.1	-87.5
40.00	26.82	-8.36	-1.20	17.26	.69	.53	891	660.9	0.0	-86.9
40.25	26.77	-8.35	-1.20	17.21	.69	.53	891	660.5	358.9	-86.4
40.50	27.32	-8.33	-1.20	17.78	.67	.51	897	660.0	357.9	-85.8
40.75	28.57	-8.30	-1.20	19.07	.64	.47	909	659.6	356.9	-85.2
41.00	29.00	-8.28	-1.19	19.53	.63	.47	911	659.1	355.9	-84.6
41.25	30.14	-8.26	-1.19	20.69	.61	.45	918	658.7	354.9	-84.0
41.50	30.85	-8.24	-1.19	21.43	.59	.43	924	658.2	354.0	-83.5
41.75	30.75	-8.22	-1.18	21.35	.58	.43	924	657.8	353.0	-82.9
42.00	30.94	-8.17	-1.18	21.58	.58	.42	926	657.3	352.1	-82.3
42.25	30.92	-8.13	-1.18	21.61	.58	.43	925	656.9	351.2	-81.7
42.50	31.30	-8.10	-1.18	22.02	.57	.42	928	656.4	350.4	-81.1
42.75	31.68	-8.05	-1.17	22.46	.56	.41	932	656.0	349.5	-80.5
43.00	29.80	-8.02	-1.17	20.61	.60	.45	917	655.5	348.7	-79.9
43.25	28.63	-7.97	-1.16	19.50	.62	.48	907	655.1	347.8	-79.3
43.50	27.96	-7.91	-1.16	18.89	.64	.50	902	654.6	347.0	-78.7
43.75	27.70	-7.86	-1.16	18.68	.64	.51	899	654.2	346.2	-78.1
44.00	26.92	-7.81	-1.15	17.96	.66	.53	893	653.7	345.5	-77.5
44.25	26.24	-7.77	-1.14	17.33	.67	.54	888	653.3	344.7	-76.9

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39344.50	25.25	-7.72	-1.14	16.39	-16.70	-16.57	878	652.9	343.9	-76.3
44.75	24.66	-7.66	-1.14	15.86	.72	.60	871	652.4	343.2	-75.7
45.00	23.96	-7.62	-1.13	15.21	.74	.62	865	652.0	342.4	-75.1
45.25	24.39	-7.56	-1.12	15.71	.72	.61	869	651.6	341.7	-74.5
45.50	24.30	-7.50	-1.12	15.69	.72	.61	868	651.1	341.0	-73.9
45.75	24.62	-7.44	-1.11	16.07	.71	.60	871	650.7	340.3	-73.3
46.00	25.34	-7.38	-1.11	16.85	.69	.58	878	650.3	339.6	-72.7
46.25	25.66	-7.29	-1.10	17.27	.68	.56	882	649.8	338.9	-72.1
46.50	25.15	-7.23	-1.09	16.82	.69	.58	877	649.4	338.2	-71.5
46.75	24.84	-7.15	-1.08	16.61	.70	.59	874	649.0	337.5	-70.9
47.00	25.35	-7.08	-1.08	17.19	.68	.57	880	648.6	336.8	-70.3
47.25	25.35	-6.99	-1.07	17.29	.67	.57	882	648.2	336.2	-69.7
47.50	25.14	-6.91	-1.06	17.17	.68	.57	879	647.7	335.5	-69.1
47.75	24.94	-6.83	-1.05	17.06	.68	.58	878	647.3	334.9	-68.5
48.00	24.83	-6.74	-1.04	17.05	.68	.58	877	646.9	334.2	-67.9
48.25	24.93	-6.64	-1.04	17.25	.68	.59	876	646.5	333.6	-67.2
48.50	25.43	-6.55	-1.03	17.86	.66	.57	882	646.1	332.9	-66.6
48.75	25.74	-6.44	-1.02	18.28	.65	.56	886	645.7	332.3	-66.0
49.00	26.96	-6.34	-1.02	19.60	.62	.53	895	645.3	331.7	-65.4
49.25	25.73	-6.22	-1.01	18.50	.64	.55	887	644.9	331.0	-64.8
49.50	24.61	-6.12	-1.00	17.49	.66	.58	878	644.5	330.4	-64.2
49.75	23.38	-5.99	-0.99	16.40	.70	.61	867	644.1	329.8	-63.6
50.00	22.57	-5.88	-0.98	15.71	.72	.64	859	643.7	329.2	-63.0
50.25	22.16	-5.73	-0.97	15.46	.73	.65	857	643.3	328.6	-62.3
50.50	21.76	-5.61	-0.96	15.20	.74	.66	853	642.9	328.0	-61.7
50.75	21.16	-5.46	-0.96	14.74	.76	.69	847	642.5	327.4	-61.1
51.00	20.97	-5.32	-0.95	14.70	.76	.69	845	642.2	326.8	-60.5
51.25	22.01	-5.17	-0.94	15.90	.72	.65	857	641.8	326.2	-59.9
51.50	21.42	-5.01	-0.93	15.48	.72	.66	855	641.4	325.6	-59.3
51.75	21.14	-4.84	-0.92	15.37	.73	.67	851	641.0	325.0	-58.6
52.00	20.86	-4.68	-0.91	15.27	.74	.68	849	640.7	324.5	-58.0
52.25	20.18	-4.50	-0.90	14.78	.76	.70	843	640.3	323.9	-57.4
52.50	19.81	-4.31	-0.88	14.61	.76	.70	841	639.9	323.3	-56.8
52.75	19.54	-4.10	-0.87	14.57	.76	.71	840	639.6	322.7	-56.2
53.00	19.39	-3.90	-0.86	14.62	.76	.71	840	639.2	322.2	-55.6
53.25	18.83	-3.69	-0.85	14.30	.77	.72	836	638.8	321.6	-54.9
53.50	18.48	-3.43	-0.84	14.21	.77	.73	835	638.5	321.0	-54.3
53.75	18.25	-3.17	-0.83	14.24	.78	.73	834	638.1	320.5	-53.7
54.00	18.01	-2.92	-0.82	14.27	.78	.74	833	637.8	319.9	-53.1
54.25	17.28	-2.61	-0.81	13.86	.79	.75	829	637.5	319.4	-52.5
54.50	16.55	-2.33	-0.80	13.42	.81	.77	824	637.1	318.8	-51.8
54.75	16.44	-2.01	-0.79	13.64	.80	.76	825	636.8	318.3	-51.2
55.00	16.44	-1.69	-0.78	13.97	.79	.75	828	636.4	317.7	-50.6
55.25	16.56	-1.35	-0.77	14.44	.77	.74	832	636.1	317.2	-50.0
55.50	16.88	-0.96	-0.76	15.16	.75	.72	839	635.8	316.6	-49.4
55.75	18.95	-0.55	-0.75	17.65	.67	.64	861	635.5	316.1	-48.7
56.00	20.11	-0.16	-0.74	19.21	.63	.60	873	635.2	315.5	-48.1
56.25	20.77	0.00	-0.72	20.05	.62	.59	877	634.8	315.0	-47.5
56.50	21.03	0.00	-0.71	20.32	.61	.58	879	634.5	314.5	-46.9
39356.80	24.43	0.00	-0.70	23.73	-16.53	-16.51	901	634.2	313.8	-46.1
57.00	24.41	0.00	-0.69	23.72	.53	.51	900	633.9	313.4	-45.6
57.20	20.25	0.00	-0.68	19.57	.62	.60	872	633.7	313.0	-45.1
39357.50	18.90	0.00	-0.67	18.23	-16.66	-16.64	860	633.3	312.3	-44.4
57.75	18.20	0.00	-0.66	17.54	.69	.67	853	633.0	311.8	-43.8
58.00	17.70	0.00	-0.65	17.05	.70	.68	848	632.8	311.3	-43.1
58.25	16.92	0.00	-0.64	16.28	.72	.70	842	632.5	310.7	-42.5
58.50	16.55	0.00	-0.62	15.93	.73	.72	838	632.2	310.2	-41.9
58.75	16.81	0.00	-0.61	16.20	.73	.71	839	631.9	309.7	-41.3

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^7 \dot{P}$	$10^7 \dot{P}_s$	$10^7 \dot{P}_t$	$-10^7 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39359.00	17.28	0.00	-0.60	16.68	-16.71	-16.70	843	631.6	309.2	-40.6
59.25	17.57	0.00	-0.59	16.98	.70	.70	844	631.4	308.6	-40.0
59.50	17.97	0.00	-0.58	17.39	.70	.69	845	631.1	308.1	-39.4
59.75	18.18	0.00	-0.57	17.61	.69	.69	846	630.9	307.6	-38.8
60.00	18.60	0.00	-0.56	18.04	.68	.67	851	630.6	307.1	-38.1
60.25	19.96	0.00	-0.54	19.42	.64	.63	862	630.3	306.5	-37.5
39360.40	20.44	0.00	-0.54	19.90	-16.62	-16.62	866	630.2	306.2	-37.1
60.60	23.28	0.00	-0.53	22.75	.56	.56	884	630.0	305.8	-36.6
60.80	27.56	0.00	-0.52	27.04	.48	.48	908	629.8	305.4	-36.1
61.00	27.23	0.00	-0.51	26.72	.48	.48	907	629.6	305.0	-35.6
61.20	24.67	0.00	-0.50	24.17	.52	.53	894	629.4	304.6	-35.1
61.40	24.20	0.00	-0.49	23.71	.54	.54	888	629.3	304.2	-34.6
61.60	23.73	0.00	-0.48	23.25	.55	.56	885	629.1	303.8	-34.1
39361.75	23.07	0.00	-0.47	22.60	-16.56	-16.23	882	628.9	303.5	-33.7
62.00	23.47	0.00	-0.46	23.01	.55	.22	884	628.7	302.9	-33.1
62.25	23.90	0.00	-0.45	23.45	.54	.22	885	628.5	302.4	-32.5
62.50	23.45	0.00	-0.44	23.01	.56	.23	880	628.3	301.9	-31.9
62.75	22.96	0.00	-0.43	22.53	.57	.24	877	628.1	301.4	-31.2
63.00	23.06	0.00	-0.42	22.64	.56	.24	878	627.9	300.9	-30.6
63.25	22.63	0.00	-0.40	22.23	.57	.24	876	627.7	300.4	-30.0
63.50	22.21	0.00	-0.39	21.82	.58	.26	872	627.5	299.9	-29.3
63.75	22.12	0.00	-0.38	21.74	.59	.27	868	627.3	299.4	-28.7
64.00	21.85	0.00	-0.37	21.48	.60	.27	866	627.1	298.9	-28.1
64.25	21.94	0.00	-0.36	21.58	.59	.27	868	626.9	298.4	-27.4
64.50	22.10	0.00	-0.35	21.75	.58	.26	869	626.7	297.9	-26.8
64.75	21.94	0.00	-0.34	21.60	.59	.27	867	626.5	297.4	-26.2
65.00	21.46	0.00	-0.33	21.13	.60	.28	862	626.4	296.9	-25.5
65.25	21.00	0.00	-0.32	20.68	.62	.30	858	626.2	296.4	-24.9
65.50	20.76	0.00	-0.30	20.46	.62	.30	856	626.0	295.9	-24.3
65.75	20.88	0.00	-0.29	20.59	.61	.30	857	625.9	295.4	-23.7
66.00	21.26	0.00	-0.28	20.98	.60	.29	861	625.7	294.9	-23.0
66.25	21.31	0.00	-0.28	21.03	.60	.29	860	625.6	294.4	-22.4
66.50	20.84	0.00	-0.27	20.57	.62	.31	854	625.4	293.9	-21.8
39366.60	20.33	0.00	-0.26	20.07	-16.63	-16.32	852	625.4	293.7	-21.5
66.80	22.59	0.00	-0.25	22.34	.57	.26	868	625.3	293.3	-21.0
67.00	27.54	0.00	-0.24	27.30	.47	.16	896	625.1	292.9	-20.5
67.20	33.29	0.00	-0.24	33.05	.38	.07	924	625.0	292.5	-20.0
67.40	27.72	0.00	-0.23	27.49	.45	.15	901	624.9	292.1	-19.5
67.60	29.65	0.00	-0.22	29.43	.43	.13	908	624.8	291.7	-19.0
39367.70	41.33	0.00	-0.22	41.11	-16.28	-15.98	953	624.8	291.5	-18.7
67.80	51.69	0.00	-0.21	51.48	.18	.88	987	624.7	291.3	-18.5
67.90	73.54	0.00	-0.21	73.33	.02	.72	1042	624.7	291.1	-18.2
68.00	94.12	0.00	-0.20	93.92	-15.91	.61	1086	624.6	290.9	-18.0
68.10	77.05	0.00	-0.20	76.85	.98	.70	1055	624.6	290.7	-17.7
68.20	52.97	0.00	-0.20	52.77	-16.15	.86	995	624.5	290.5	-17.5
39368.40	35.74	0.00	-0.19	35.55	-16.35	-16.05	930	624.4	290.1	-17.0
68.60	32.38	0.00	-0.18	32.20	.41	.10	911	624.3	289.7	-16.4
68.80	27.57	0.00	-0.17	27.40	.48	.17	891	624.3	289.3	-15.9
69.00	20.68	0.00	-0.16	20.52	.60	.29	855	624.2	288.9	-15.4
69.20	20.14	0.00	-0.16	19.98	.62	.31	849	624.1	288.5	-14.9
69.40	20.38	0.00	-0.15	20.23	.62	.31	849	624.0	288.1	-14.4
69.60	23.14	0.00	-0.14	23.00	.56	.25	867	623.9	287.7	-13.9
69.80	23.80	0.00	-0.14	23.66	.54	.24	870	623.9	287.3	-13.4
70.00	23.95	0.00	-0.13	23.82	.54	.24	871	623.8	286.9	-12.9
70.20	22.95	0.00	-0.12	22.83	.56	.26	865	623.7	286.5	-12.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39370.40	1.92	0.00	-0.01	1.91	-16.65	-16.34	839	623.6	286.1	-11.9
70.60	1.55	0.00	-0.01	1.55	.75	.45	811	623.6	285.7	-11.4
70.80	2.01	0.00	-0.01	2.01	.63	.33	843	623.5	285.3	-10.9
71.00	1.91	0.00	-0.01	1.90	.64	.34	839	623.4	284.9	-10.4
71.20	1.75	0.00	-0.01	1.75	.68	.38	828	623.4	284.5	-9.9
71.40	2.10	0.00	-0.01	2.09	.61	.31	848	623.3	284.1	-9.4
71.60	3.51	0.00	-0.01	3.50	.38	.08	915	623.3	283.7	-8.9
71.80	4.33	0.00	-0.01	4.32	.27	-15.98	947	623.2	283.3	-8.3
72.00	4.86	0.00	-0.01	4.85	.21	.92	967	623.2	282.9	-7.8
72.20	8.30	0.00	-0.01	8.30	-15.95	.68	1057	623.1	282.5	-7.3
72.40	6.26	0.00	0.00	6.25	-16.06	.80	1013	623.1	282.1	-6.8
72.60	4.43	0.00	0.00	4.42	.24	.96	954	623.0	281.7	-6.3
39372.70	3.34	0.00	0.00	3.34	-16.38	-16.09	912	623.0	281.5	-6.1
39372.80	2.81	0.00	0.00	2.80	-16.47	-16.17	887	623.0	281.3	-5.8
73.00	2.16	0.00	0.00	2.16	.60	.30	849	622.9	280.9	-5.3
73.20	1.76	0.00	0.00	1.75	.70	.40	819	622.9	280.6	-4.8
73.40	1.66	0.00	0.00	1.66	.74	.44	809	622.9	280.2	-4.3
73.60	1.55	0.00	0.00	1.55	.77	.47	801	622.8	279.8	-3.8
73.80	1.45	0.00	0.00	1.45	.78	.48	797	622.8	279.4	-3.3
74.00	1.38	0.00	0.00	1.38	.81	.51	790	622.8	279.0	-2.7
74.20	1.37	0.00	0.00	1.37	.81	.52	787	622.7	278.6	-2.2
74.40	1.40	0.00	0.00	1.40	.79	.49	792	622.7	278.2	-1.7
74.60	1.51	0.00	0.00	1.51	.75	.45	803	622.7	277.8	-1.2
39374.75	1.64	0.00	0.00	1.64	-16.72	-16.42	812	622.7	277.5	-0.8
75.00	1.52	0.00	0.00	1.52	.77	.47	799	622.6	277.0	-0.2
75.25	1.42	0.00	0.00	1.43	.80	.51	789	622.6	276.5	0.4
75.50	1.44	0.00	0.00	1.44	.80	.50	790	622.6	276.0	1.1
75.75	1.39	0.00	0.00	1.40	.81	.51	786	622.6	275.5	1.7
76.00	1.38	0.00	0.01	1.38	.81	.52	785	622.6	275.0	2.4
76.25	1.52	0.00	0.01	1.53	.76	.46	798	622.5	274.5	3.0
76.50	1.86	0.00	0.01	1.86	.67	.37	824	622.5	274.0	3.6
76.75	2.77	0.00	0.01	2.78	.49	.19	874	622.5	273.5	4.3
77.00	1.99	0.00	0.01	1.99	.64	.34	831	622.5	273.0	4.9
77.25	1.83	0.00	0.01	1.84	.68	.38	819	622.5	272.5	5.6
77.50	1.66	0.00	0.01	1.66	.73	.44	804	622.5	272.0	6.2
77.75	1.56	0.00	0.01	1.57	.76	.46	797	622.5	271.5	6.8
78.00	1.46	0.00	0.01	1.47	.79	.49	789	622.5	271.0	7.5
78.25	1.41	0.00	0.01	1.42	.80	.50	786	622.5	270.5	8.1
78.50	1.33	0.00	0.01	1.33	.83	.53	777	622.5	270.0	8.8
78.75	1.31	0.00	0.01	1.32	.84	.54	774	622.5	269.5	9.4
79.00	1.26	0.00	0.01	1.27	.85	.56	769	622.5	269.0	10.0
79.25	1.21	0.00	0.01	1.22	.87	.58	764	622.5	268.5	10.7
79.50	1.19	0.00	0.01	1.20	.89	.59	759	622.5	268.0	11.3
79.75	1.13	0.00	0.01	1.14	.92	.63	750	622.6	267.5	12.0
80.00	1.06	0.00	0.01	1.07	.95	.67	741	622.6	267.0	12.6
80.25	1.00	0.00	0.01	1.01	.98	.70	733	622.6	266.5	13.2
80.50	1.00	0.00	0.01	1.01	.97	.69	733	622.6	266.0	13.9
80.75	1.04	0.00	0.01	1.05	.95	.66	739	622.6	265.5	14.5
81.00	1.08	0.00	0.01	1.09	.94	.65	743	622.6	265.0	15.2
81.25	1.12	0.00	0.01	1.13	.92	.63	747	622.7	264.5	15.8
81.50	1.15	0.00	0.01	1.16	.91	.62	750	622.7	264.0	16.5
81.75	1.16	0.00	0.01	1.17	.91	.62	750	622.7	263.5	17.1
82.00	1.16	0.00	0.01	1.17	.91	.62	750	622.7	263.0	17.7
82.25	1.14	0.00	0.01	1.15	.92	.63	747	622.7	262.5	18.4
82.50	1.13	0.00	0.01	1.14	.92	.63	746	622.8	262.0	19.0
82.75	1.18	0.00	0.01	1.19	.89	.60	752	622.8	261.5	19.7
83.00	1.26	0.00	0.01	1.27	.85	.55	764	622.8	261.0	20.3

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39383.25	1.40	0.00	0.01	1.41	-16.79	-16.49	780	622.8	260.5	20.9
83.50	1.42	0.00	0.01	1.43	.79	.49	781	622.9	260.0	21.6
83.75	1.41	0.00	0.01	1.42	.80	.50	777	622.9	259.4	22.2
84.00	1.51	0.00	0.01	1.52	.77	.47	786	622.9	258.9	22.9
84.25	1.53	0.00	0.01	1.54	.76	.46	788	623.0	258.4	23.5
84.50	1.44	0.00	0.01	1.44	.80	.50	777	623.0	257.9	24.1
84.75	1.42	0.00	0.01	1.43	.80	.50	775	623.0	257.4	24.8
85.00	1.43	0.00	0.01	1.44	.79	.49	777	623.0	256.9	25.4
85.25	1.43	0.00	0.01	1.44	.78	.48	780	623.1	256.3	26.1
85.50	1.42	0.00	0.01	1.43	.78	.48	779	623.1	255.8	26.7
85.75	1.41	0.00	0.01	1.42	.79	.49	776	623.1	255.3	27.4
86.00	1.36	0.00	0.01	1.37	.82	.52	769	623.2	254.8	28.0
86.25	1.36	0.00	0.01	1.37	.82	.52	767	623.2	254.3	28.6
86.50	1.47	0.00	0.00	1.47	.79	.49	776	623.2	253.7	29.3
86.75	1.51	0.00	0.00	1.51	.77	.47	780	623.2	253.2	29.9
87.00	1.61	0.00	0.00	1.61	.74	.44	788	623.3	252.7	30.6
87.25	1.72	0.00	0.00	1.72	.70	.39	800	623.3	252.2	31.2
87.50	2.10	0.00	0.00	2.10	.60	.30	826	623.3	251.6	31.8
87.75	2.04	0.00	0.00	2.05	.61	.31	822	623.3	251.1	32.5
88.00	2.08	0.00	0.00	2.08	.60	.30	826	623.4	250.6	33.1
88.25	2.12	0.00	0.00	2.13	.58	.28	830	623.4	250.0	33.8
88.50	2.18	0.00	0.00	2.18	.57	.27	833	623.4	249.5	34.4
88.75	2.30	0.00	0.00	2.30	.54	.25	840	623.4	249.0	35.0
89.00	2.30	0.00	0.00	2.30	.54	.25	839	623.5	248.4	35.7
89.25	2.20	0.00	0.00	2.19	.57	.27	832	623.5	247.9	36.3
89.50	2.02	0.00	0.00	2.02	.61	.31	820	623.5	247.3	37.0
89.75	1.97	0.00	0.00	1.97	.63	.32	815	623.5	246.8	37.6
90.00	1.87	0.00	0.00	1.87	.65	.35	808	623.5	246.3	38.2
90.25	1.70	0.00	0.00	1.69	.70	.40	794	623.5	245.7	38.9
90.50	1.67	0.00	0.00	1.67	.70	.40	792	623.6	245.2	39.5
90.75	1.68	0.00	-0.01	1.67	.71	.41	790	623.6	244.6	40.2
91.00	1.63	0.00	-0.01	1.62	.72	.41	788	623.6	244.0	40.8
91.25	1.51	0.00	-0.01	1.50	.75	.44	780	623.6	243.5	41.4
91.50	1.75	0.00	-0.01	1.74	.68	.38	798	623.6	242.9	42.1
91.75	2.14	0.00	-0.01	2.13	.58	.28	824	623.6	242.4	42.7
92.00	2.86	0.00	-0.01	2.85	.45	.15	860	623.6	241.8	43.4
92.25	2.84	-0.01	-0.01	2.83	.46	.16	857	623.6	241.2	44.0
92.50	2.51	-0.02	-0.01	2.48	.52	.22	839	623.6	240.7	44.6
92.75	2.25	-0.03	-0.01	2.20	.57	.27	824	623.6	240.1	45.3
93.00	2.23	-0.05	-0.01	2.17	.58	.28	822	623.6	239.5	45.9
93.25	2.20	-0.06	-0.01	2.13	.58	.28	821	623.6	238.9	46.6
93.50	2.19	-0.08	-0.01	2.10	.59	.29	819	623.6	238.3	47.2
93.75	2.14	-0.09	-0.01	2.04	.61	.31	811	623.6	237.7	47.8
94.00	2.06	-0.10	-0.02	1.94	.64	.34	803	623.6	237.2	48.5
94.25	2.12	-0.11	-0.02	1.99	.61	.32	809	623.6	236.6	49.1
94.50	2.15	-0.13	-0.02	2.01	.60	.31	812	623.5	236.0	49.8
94.75	2.27	-0.14	-0.02	2.11	.58	.28	818	623.5	235.4	50.4
95.00	2.34	-0.15	-0.02	2.17	.56	.27	822	623.5	234.7	51.0
95.25	2.46	-0.16	-0.02	2.27	.55	.25	826	623.5	234.1	51.7
95.50	2.52	-0.18	-0.02	2.33	.54	.24	828	623.5	233.5	52.3
95.75	2.46	-0.19	-0.02	2.25	.56	.26	822	623.4	232.9	52.9
96.00	2.43	-0.20	-0.02	2.21	.57	.27	818	623.4	232.3	53.6
96.25	2.41	-0.21	-0.02	2.18	.57	.27	817	623.4	231.6	54.2
96.50	2.40	-0.22	-0.02	2.16	.57	.28	815	623.3	231.0	54.8
96.75	2.38	-0.23	-0.02	2.12	.59	.29	811	623.3	230.4	55.5
97.00	2.37	-0.24	-0.03	2.10	.59	.30	809	623.2	229.7	56.1
97.25	2.28	-0.26	-0.03	2.00	.61	.32	803	623.2	229.1	56.7
97.50	2.26	-0.27	-0.03	1.96	.62	.33	800	623.1	228.4	57.4
97.75	2.22	-0.28	-0.03	1.92	.63	.34	796	623.1	227.7	58.0
98.00	2.23	-0.29	-0.03	1.91	.63	.34	795	623.0	227.1	58.6

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39398.25	2.23	-0.30	-0.03	1.90	-16.63	-16.34	794	623.0	226.4	59.3
98.50	2.18	-0.31	-0.03	1.83	.64	.35	790	622.9	225.7	59.9
98.75	2.15	-0.32	-0.03	1.79	.65	.36	788	622.9	225.0	60.5
99.00	2.17	-0.33	-0.03	1.80	.65	.36	788	622.8	224.3	61.1
99.25	2.20	-0.34	-0.03	1.83	.64	.35	789	622.7	223.6	61.8
99.50	2.25	-0.35	-0.03	1.87	.63	.35	791	622.7	222.8	62.4
99.75	2.17	-0.36	-0.04	1.77	.66	.39	782	622.6	222.1	63.0
39400.00	1.98	-0.37	-0.04	1.58	.72	.44	766	622.5	221.4	63.7
00.25	1.90	-0.38	-0.04	1.48	.74	.47	757	622.4	220.6	64.3
00.50	1.80	-0.39	-0.04	1.37	.77	.49	747	622.3	219.8	64.9
00.75	1.87	-0.40	-0.04	1.43	.75	.47	753	622.3	219.0	65.5
01.00	1.94	-0.41	-0.04	1.49	.73	.45	758	622.2	218.2	66.1
01.25	1.98	-0.42	-0.04	1.51	.72	.45	760	622.1	217.4	66.8
01.50	2.05	-0.43	-0.04	1.58	.69	.42	767	622.0	216.6	67.4
01.75	2.17	-0.44	-0.04	1.69	.66	.39	776	621.9	215.8	68.0
02.00	2.29	-0.45	-0.04	1.80	.63	.36	784	621.8	214.9	68.6
02.25	2.41	-0.46	-0.04	1.91	.60	.32	793	621.6	214.1	69.2
02.50	2.85	-0.47	-0.05	2.33	.50	.22	820	621.5	213.2	69.9
02.75	3.66	-0.48	-0.05	3.13	.37	.09	859	621.4	212.3	70.5
03.00	5.03	-0.49	-0.05	4.49	.19	-15.92	910	621.3	211.3	71.1
03.25	5.69	-0.50	-0.05	5.14	.12	.85	932	621.2	210.4	71.7
03.50	4.91	-0.51	-0.05	4.35	.20	.93	907	621.0	209.4	72.3
03.75	4.76	-0.52	-0.05	4.19	.22	.95	900	620.9	208.4	72.9
04.00	3.72	-0.53	-0.05	3.14	.35	-16.08	860	620.8	207.4	73.5
04.25	3.72	-0.54	-0.05	3.12	.35	.08	858	620.6	206.3	74.1
04.50	4.14	-0.55	-0.05	3.54	.30	.03	874	620.5	205.2	74.7
04.75	3.53	-0.56	-0.06	2.91	.38	.12	848	620.4	204.1	75.3
05.00	2.97	-0.57	-0.06	2.34	.49	.22	817	620.2	202.9	75.9
05.25	2.84	-0.58	-0.06	2.20	.52	.25	806	620.1	201.8	76.5
05.50	3.02	-0.59	-0.06	2.37	.50	.24	813	619.9	200.5	77.1
05.75	3.17	-0.60	-0.06	2.51	.47	.22	819	619.7	199.2	77.6
06.00	3.13	-0.61	-0.06	2.46	.47	.21	818	619.6	197.9	78.2
06.25	3.08	-0.62	-0.06	2.40	.48	.22	814	619.4	196.6	78.8
06.50	2.96	-0.63	-0.06	2.27	.51	.25	806	619.2	195.1	79.4
06.75	2.89	-0.64	-0.06	2.18	.53	.28	798	619.1	193.6	79.9
07.00	2.87	-0.65	-0.06	2.16	.55	.29	794	618.9	192.1	80.5
07.25	3.04	-0.66	-0.07	2.32	.51	.25	804	618.7	190.5	81.0
07.50	3.36	-0.66	-0.07	2.63	.45	.19	821	618.5	188.8	81.6
07.75	3.62	-0.67	-0.07	2.88	.41	.16	832	618.3	187.1	82.1
08.00	3.27	-0.68	-0.07	2.52	.47	.22	813	618.1	185.2	82.6
08.25	3.22	-0.69	-0.07	2.46	.49	.24	806	617.9	183.3	83.1
08.50	3.12	-0.70	-0.07	2.35	.51	.27	799	617.7	181.3	83.7
08.75	3.08	-0.70	-0.07	2.30	.52	.28	795	617.5	179.1	84.2
09.00	3.07	-0.71	-0.07	2.29	.52	.28	794	617.3	176.9	84.6
09.25	3.17	-0.72	-0.07	2.38	.51	.27	798	617.1	174.5	85.1
09.50	3.26	-0.73	-0.07	2.45	.50	.26	800	616.9	172.1	85.6
09.75	3.35	-0.73	-0.07	2.54	.48	.25	804	616.7	169.5	86.0
10.00	3.49	-0.74	-0.08	2.67	.46	.22	810	616.4	166.8	86.4
10.25	3.93	-0.75	-0.08	3.10	.39	.15	831	616.2	163.9	86.8
10.50	4.90	-0.75	-0.08	4.07	.26	.02	868	616.0	161.0	87.2
10.75	4.91	-0.76	-0.08	4.07	.26	.03	867	615.8	157.8	87.6
11.00	4.68	-0.76	-0.08	3.83	.28	.05	860	615.5	154.6	87.9
11.25	4.80	-0.77	-0.08	3.95	.26	.04	864	615.3	151.2	88.2
11.50	4.87	-0.78	-0.08	4.01	.26	.03	864	615.0	147.6	88.5
11.75	5.02	-0.78	-0.08	4.15	.25	.02	868	614.8	144.0	88.8
12.00	5.21	-0.79	-0.08	4.34	.22	.00	874	614.5	140.2	89.0
12.25	5.30	-0.79	-0.08	4.42	.21	-15.99	876	614.3	136.3	89.2
12.50	5.27	-0.80	-0.08	4.39	.22	-16.00	874	614.0	132.4	89.4
12.75	5.44	-0.80	-0.08	4.55	.21	-15.99	876	613.8	128.4	89.5
13.00	5.23	-0.81	-0.09	4.33	.23	-16.01	868	613.5	124.4	89.6

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39413.25	5.19	-0.81	-0.09	4.29	-16.23	-16.02	867	613.3	120.4	89.7
13.50	5.63	-0.82	-0.09	4.73	.18	-15.97	881	613.0	116.4	89.7
13.75	7.56	-0.82	-0.09	6.65	.03	.82	929	612.7	112.5	89.7
14.00	7.86	-0.83	-0.09	6.94	.00	.79	937	612.5	108.6	89.7
14.25	8.03	-0.84	-0.09	7.10	-15.99	.78	941	612.2	104.9	89.6
14.50	10.51	-0.84	-0.09	9.58	.85	.65	986	611.9	101.3	89.6
14.75	10.66	-0.84	-0.09	9.72	.84	.64	989	611.6	97.8	89.4
15.00	6.93	-0.85	-0.09	5.99	-16.06	.86	916	611.3	94.4	89.3
15.25	6.60	-0.85	-0.09	5.65	.09	.89	904	611.1	91.2	89.1
15.50	6.57	-0.86	-0.09	5.62	.10	.90	900	610.8	88.1	88.9
15.75	6.46	-0.86	-0.09	5.50	.11	.92	896	610.5	85.1	88.7
16.00	6.27	-0.87	-0.09	5.31	.12	.93	891	610.2	82.3	88.5
16.25	6.18	-0.87	-0.10	5.21	.13	.94	889	609.9	79.7	88.2
16.50	6.09	-0.88	-0.10	5.12	.14	.95	885	609.6	77.1	88.0
16.75	6.00	-0.88	-0.10	5.02	.15	.96	881	609.3	74.7	87.7
17.00	5.88	-0.89	-0.10	4.90	.16	.97	878	609.0	72.4	87.4
17.25	5.81	-0.89	-0.10	4.82	.16	.98	876	608.7	70.2	87.1
17.50	5.89	-0.89	-0.10	4.91	.15	.97	878	608.4	68.2	86.8
17.75	5.82	-0.89	-0.10	4.83	.16	.98	875	608.1	66.2	86.4
18.00	5.76	-0.90	-0.10	4.76	.16	.99	873	607.8	64.3	86.1
18.25	5.84	-0.90	-0.10	4.84	.15	.98	876	607.5	62.5	85.7
18.50	5.98	-0.90	-0.10	4.98	.14	.97	879	607.2	60.7	85.4
18.75	6.20	-0.91	-0.10	5.19	.12	.95	884	606.8	59.1	85.0
19.00	6.29	-0.91	-0.10	5.28	.11	.94	886	606.5	57.5	84.6
19.25	6.14	-0.91	-0.10	5.13	.12	.96	881	606.2	56.0	84.3
19.50	5.98	-0.92	-0.10	4.97	.14	.97	877	605.9	54.5	83.9
19.75	5.88	-0.92	-0.10	4.86	.14	.98	875	605.6	53.1	83.5
20.00	5.87	-0.92	-0.10	4.84	.14	.98	874	605.3	51.7	83.1
20.25	5.65	-0.92	-0.10	4.63	.15	.99	869	604.9	50.2	82.5
20.50	5.04	-0.92	-0.10	4.01	.21	-16.06	850	604.6	48.9	82.1
20.75	5.32	-0.93	-0.10	4.29	.18	.03	859	604.3	47.7	81.7
21.00	5.58	-0.93	-0.10	4.54	.15	.00	867	604.0	46.5	81.3
21.25	5.78	-0.93	-0.10	4.74	.13	-15.98	874	603.7	45.4	80.9
21.50	5.95	-0.93	-0.11	4.92	.11	.96	878	603.3	44.3	80.5
21.75	6.15	-0.93	-0.11	5.11	.10	.95	882	603.0	43.2	80.1
22.00	6.49	-0.93	-0.11	5.45	.06	.92	891	602.7	42.2	79.7
22.25	7.26	-0.93	-0.11	6.22	.00	.86	910	602.3	41.2	79.2
22.50	8.83	-0.93	-0.11	7.79	-15.90	.76	942	602.0	40.2	78.8
22.75	9.32	-0.93	-0.11	8.28	.87	.73	952	601.7	39.3	78.4
23.00	9.28	-0.93	-0.11	8.24	.87	.73	953	601.4	38.3	78.0
23.25	9.29	-0.93	-0.11	8.24	.86	.73	952	601.0	37.4	77.6
23.50	9.03	-0.93	-0.11	7.99	.88	.75	948	600.7	36.5	77.2
23.75	8.76	-0.93	-0.11	7.71	.89	.77	942	600.4	35.7	76.7
24.00	8.70	-0.93	-0.11	7.66	.89	.77	940	600.1	34.8	76.3
24.25	8.93	-0.93	-0.11	7.89	.88	.76	945	599.7	33.9	75.9
24.50	8.99	-0.93	-0.11	7.95	.88	.76	943	599.4	33.1	75.5
24.75	8.49	-0.93	-0.11	7.45	.91	.79	932	599.1	32.3	75.1
25.00	7.61	-0.93	-0.11	6.57	.97	.85	914	598.7	31.5	74.6
25.25	7.04	-0.93	-0.11	6.00	-16.01	.89	899	598.4	30.7	74.2
25.50	6.92	-0.93	-0.11	5.89	.02	.91	894	598.1	29.9	73.8
25.75	6.84	-0.93	-0.11	5.80	.03	.92	891	597.8	29.2	73.4
26.00	6.73	-0.93	-0.11	5.70	.03	.92	890	597.4	28.4	72.9
26.25	6.39	-0.93	-0.11	5.35	.06	.95	881	597.1	27.7	72.5
26.50	6.23	-0.92	-0.11	5.20	.08	.97	875	596.8	26.9	72.1
26.75	6.19	-0.92	-0.11	5.16	.09	.98	872	596.5	26.2	71.6
27.00	6.18	-0.92	-0.11	5.15	.08	.98	872	596.1	25.5	71.2
27.25	6.13	-0.92	-0.11	5.10	.08	.98	871	595.8	24.7	70.7
27.50	6.18	-0.92	-0.11	5.15	.08	.98	872	595.5	24.0	70.3
27.75	6.29	-0.92	-0.11	5.26	.07	.98	874	595.2	23.3	69.9
28.00	6.50	-0.92	-0.11	5.48	.05	.96	879	594.9	22.6	69.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39428.25	6.84	-0.92	-0.11	5.82	-16.02	-15.93	888	594.5	21.9	69.0
28.50	7.33	-0.91	-0.11	6.31	-15.98	.89	899	594.2	21.3	68.5
28.75	8.47	-0.91	-0.11	7.45	.91	.82	923	593.9	20.6	68.1
29.00	9.42	-0.91	-0.11	8.41	.85	.76	943	593.6	19.9	67.6
29.25	10.53	-0.91	-0.11	9.52	.79	.70	963	593.3	19.2	67.1
29.50	11.62	-0.90	-0.10	10.62	.74	.66	980	593.0	18.6	66.7
29.75	12.01	-0.88	-0.10	11.03	.72	.64	985	592.7	17.9	66.2
30.00	11.57	-0.90	-0.10	10.57	.74	.66	978	592.3	17.3	65.8
30.25	11.60	-0.89	-0.10	10.60	.74	.66	977	592.0	16.6	65.3
30.50	11.11	-0.89	-0.10	10.11	.76	.69	970	591.7	16.0	64.8
30.75	10.40	-0.89	-0.10	9.41	.79	.72	959	591.4	15.3	64.4
31.00	8.95	-0.89	-0.10	7.97	.86	.79	935	591.1	14.7	63.8
31.25	8.33	-0.88	-0.10	7.34	.90	.83	921	590.8	14.0	63.4
31.50	8.16	-0.88	-0.10	7.18	.91	.84	916	590.5	13.4	62.9
31.75	8.04	-0.87	-0.10	7.06	.92	.85	914	590.2	12.8	62.4
32.00	7.92	-0.87	-0.10	6.95	.92	.86	912	589.9	12.2	61.9
32.25	7.88	-0.87	-0.10	6.91	.92	.86	911	589.7	11.6	61.5
32.50	7.95	-0.86	-0.10	6.99	.92	.86	913	589.4	11.0	61.0
32.75	7.97	-0.86	-0.10	7.01	.91	.86	914	589.1	10.3	60.5
33.00	7.24	-0.85	-0.10	6.29	.96	.91	898	588.8	9.7	60.1
33.25	6.98	-0.85	-0.10	6.03	.98	.93	891	588.5	9.1	59.6
33.50	6.99	-0.84	-0.10	6.04	.98	.93	890	588.2	8.5	59.1
33.75	7.00	-0.84	-0.10	6.07	.99	.94	888	588.0	7.9	58.7
34.00	7.11	-0.84	-0.10	6.17	.98	.93	891	587.7	7.4	58.2
34.25	7.24	-0.83	-0.10	6.31	.96	.92	895	587.4	6.8	57.7
34.50	7.29	-0.83	-0.10	6.36	.96	.92	895	587.1	6.2	57.3
34.75	7.39	-0.82	-0.10	6.46	.95	.91	898	586.9	5.6	56.8
35.00	7.55	-0.82	-0.10	6.63	.94	.90	901	586.6	5.0	56.3
35.25	7.71	-0.81	-0.10	6.80	.93	.89	903	586.3	4.4	55.9
35.50	7.83	-0.81	-0.10	6.93	.92	.88	906	586.1	3.9	55.4
35.75	8.09	-0.80	-0.10	7.19	.91	.87	911	585.8	3.3	54.9
36.00	8.29	-0.80	-0.10	7.39	.89	.86	915	585.6	2.7	54.5
36.25	8.52	-0.79	-0.09	7.63	.88	.85	919	585.3	2.1	54.0
36.50	8.78	-0.79	-0.09	7.90	.87	.83	924	585.1	1.6	53.5
36.75	8.98	-0.78	-0.09	8.11	.86	.83	926	584.8	1.0	53.1
37.00	9.23	-0.78	-0.09	8.36	.84	.81	931	584.6	0.4	52.6
37.25	9.38	-0.77	-0.09	8.52	.82	.80	936	584.4	359.9	52.1
37.50	9.48	-0.76	-0.09	8.62	.82	.79	938	584.1	359.3	51.7
37.75	9.41	-0.76	-0.09	8.56	.83	.80	935	583.9	358.7	51.2
38.00	9.12	-0.75	-0.09	8.28	.84	.82	930	583.7	358.2	50.7
38.25	9.00	-0.75	-0.09	8.17	.85	.82	928	583.4	357.6	50.3
38.50	8.94	-0.74	-0.09	8.11	.85	.83	926	583.2	357.1	49.8
38.75	8.71	-0.73	-0.09	7.89	.86	.84	922	583.0	356.5	49.4
39.00	8.49	-0.72	-0.09	7.68	.88	.86	918	582.8	356.0	48.9
39.25	9.28	-0.72	-0.09	8.47	.83	.82	932	582.6	355.4	48.4
39.50	9.86	-0.71	-0.09	9.07	.80	.78	943	582.4	354.9	48.0
39.75	10.10	-0.70	-0.08	9.31	.78	.77	948	582.2	354.3	47.5
40.00	10.14	-0.70	-0.08	9.36	.78	.77	948	582.0	353.8	47.0
40.25	10.11	-0.69	-0.08	9.34	.78	.77	948	581.8	353.2	46.6
40.50	9.94	-0.68	-0.08	9.17	.79	.78	945	581.6	352.7	46.1
40.75	9.57	-0.68	-0.08	8.81	.81	.80	939	581.4	352.1	45.7
41.00	9.32	-0.67	-0.08	8.57	.82	.82	933	581.2	351.6	45.2
41.25	9.64	-0.66	-0.08	8.90	.81	.80	939	581.0	351.0	44.7
41.50	9.65	-0.65	-0.08	8.92	.80	.80	941	580.8	350.5	44.3
41.75	9.80	-0.65	-0.08	9.07	.79	.79	943	580.7	349.9	43.8
42.00	9.98	-0.64	-0.08	9.26	.78	.78	946	580.5	349.4	43.3
42.25	10.09	-0.63	-0.08	9.38	.78	.78	948	580.3	348.9	42.9
42.50	10.23	-0.62	-0.08	9.53	.77	.77	950	580.2	348.3	42.4
42.75	10.26	-0.62	-0.08	9.56	.77	.77	951	580.0	347.8	42.0
43.00	9.77	-0.61	-0.08	9.09	.79	.79	943	579.9	347.2	41.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39443.25	9.50	-0.60	-0.07	8.82	-15.81	-15.81	939	579.7	346.7	41.0
43.50	9.35	-0.60	-0.07	8.68	.82	.82	935	579.6	346.2	40.6
43.75	9.28	-0.59	-0.07	8.62	.82	.83	934	579.4	345.6	40.1
44.00	9.25	-0.58	-0.07	8.60	.82	.83	933	579.3	345.1	39.6
44.25	9.32	-0.57	-0.07	8.68	.82	.82	935	579.1	344.5	39.2
44.50	9.47	-0.56	-0.07	8.83	.81	.81	938	579.0	344.0	38.7
44.75	9.76	-0.56	-0.07	9.13	.79	.80	943	578.9	343.5	38.2
39445.00	10.25	-0.55	-0.07	9.63	-15.77	-15.78	952	578.8	342.9	37.8
45.20	10.27	-0.54	-0.07	9.65	.77	.77	953	578.7	342.5	37.4
45.40	10.22	-0.54	-0.07	9.61	.77	.78	953	578.6	342.1	37.0
45.60	10.11	-0.53	-0.07	9.51	.77	.78	951	578.5	341.6	36.6
45.80	9.92	-0.53	-0.06	9.32	.78	.79	948	578.4	341.2	36.3
46.00	9.76	-0.52	-0.06	9.18	.79	.80	945	578.3	340.8	35.9
46.20	10.03	-0.51	-0.06	9.46	.77	.79	950	578.2	340.3	35.5
46.40	10.42	-0.51	-0.06	9.85	.75	.76	958	578.1	339.9	35.1
46.60	10.90	-0.50	-0.06	10.34	.73	.75	965	578.1	339.5	34.7
46.80	10.87	-0.49	-0.06	10.31	.74	.75	963	578.0	339.1	34.3
47.00	10.55	-0.49	-0.06	10.00	.75	.76	960	577.9	338.6	34.0
47.20	10.35	-0.48	-0.06	9.81	.76	.77	956	577.8	338.2	33.6
47.40	10.08	-0.48	-0.06	9.55	.78	.80	949	577.8	337.8	33.2
47.60	9.94	-0.47	-0.06	9.41	.79	.80	948	577.7	337.3	32.8
47.80	10.91	-0.46	-0.06	10.40	.74	.75	965	577.6	336.9	32.4
48.00	10.69	-0.45	-0.06	10.18	.74	.76	963	577.6	336.5	32.0
48.20	10.12	-0.45	-0.06	9.61	.77	.78	955	577.5	336.1	31.6
48.40	9.94	-0.44	-0.06	9.45	.77	.79	952	577.5	335.6	31.2
48.60	9.94	-0.43	-0.06	9.45	.78	.79	952	577.4	335.2	30.9
39448.75	9.89	-0.43	-0.06	9.41	-15.78	-15.80	950	577.4	334.9	30.6
49.00	9.79	-0.42	-0.05	9.32	.79	.80	949	577.3	334.3	30.1
49.25	9.67	-0.41	-0.05	9.21	.79	.81	947	577.3	333.8	29.6
49.50	9.53	-0.40	-0.05	9.08	.80	.82	944	577.2	333.3	29.1
49.75	9.40	-0.39	-0.05	8.96	.81	.83	941	577.2	332.7	28.6
50.00	9.36	-0.38	-0.05	8.93	.81	.83	942	577.1	332.2	28.1
50.25	9.29	-0.37	-0.05	8.86	.81	.83	941	577.1	331.7	27.6
50.50	8.95	-0.36	-0.05	8.54	.83	.85	936	577.1	331.1	27.1
50.75	8.65	-0.35	-0.05	8.24	.85	.87	930	577.0	330.6	26.6
51.00	8.37	-0.34	-0.05	7.98	.87	.89	925	577.0	330.1	26.1
51.25	8.06	-0.34	-0.05	7.68	.88	.90	921	577.0	329.5	25.6
51.50	7.88	-0.33	-0.05	7.50	.89	.91	917	577.0	329.0	25.1
51.75	7.67	-0.32	-0.05	7.31	.91	.93	913	577.0	328.4	24.6
52.00	7.44	-0.31	-0.05	7.08	.93	.95	908	577.0	327.9	24.2
39452.20	7.27	-0.30	-0.05	6.92	-15.93	-15.95	906	577.0	327.5	23.8
52.40	7.12	-0.30	-0.05	6.78	.94	.96	904	577.0	327.1	23.4
52.60	6.99	-0.29	-0.04	6.66	.95	.97	901	577.0	326.6	23.0
52.80	6.95	-0.28	-0.04	6.62	.95	.97	901	577.0	326.2	22.6
53.00	6.95	-0.27	-0.04	6.63	.95	.97	902	577.0	325.8	22.2
53.20	7.01	-0.27	-0.04	6.70	.95	.97	904	577.0	325.3	21.8
53.40	6.92	-0.26	-0.04	6.62	.95	.97	904	577.0	324.9	21.4
53.60	6.90	-0.25	-0.04	6.61	.94	.96	905	577.0	324.5	21.0
53.80	6.89	-0.25	-0.04	6.60	.95	.97	903	577.0	324.1	20.6
54.00	6.89	-0.24	-0.04	6.61	.95	.97	903	577.0	323.6	20.2
54.20	6.84	-0.23	-0.04	6.57	.96	.98	902	577.1	323.2	19.8
54.40	6.76	-0.23	-0.04	6.50	.96	.98	901	577.1	322.8	19.4
54.60	6.51	-0.22	-0.04	6.25	.98	-16.00	896	577.1	322.3	19.0
54.80	6.34	-0.21	-0.04	6.09	.99	.01	894	577.1	321.9	18.6
55.00	6.27	-0.20	-0.04	6.02	.99	.01	893	577.2	321.5	18.2
55.20	6.53	-0.20	-0.04	6.30	.97	-15.99	900	577.2	321.0	17.8
55.40	6.93	-0.19	-0.04	6.70	.94	.95	910	577.2	320.6	17.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39455.60	7.28	-0.18	-0.04	7.06	-15.92	-15.93	917	577.3	320.2	17.0
55.80	7.95	-0.18	-0.04	7.74	.88	.90	930	577.3	319.8	16.6
56.00	9.34	-0.17	-0.04	9.14	.81	.83	953	577.4	319.3	16.2
56.20	6.65	-0.16	-0.03	6.46	.97	.99	903	577.4	318.9	15.8
56.40	4.55	-0.16	-0.03	4.36	-16.14	-16.15	854	577.5	318.5	15.4
56.60	4.54	-0.15	-0.03	4.36	.13	.15	855	577.5	318.0	15.0
56.80	5.75	-0.14	-0.03	5.58	.03	.05	886	577.6	317.6	14.6
57.00	5.99	-0.13	-0.03	5.82	.01	.02	893	577.6	317.2	14.2
57.20	6.36	-0.13	-0.03	6.20	-15.98	-15.99	902	577.7	316.7	13.8
57.40	6.63	-0.12	-0.03	6.47	.96	.98	908	577.7	316.3	13.4
57.60	7.00	-0.11	-0.03	6.86	.93	.95	917	577.8	315.9	13.0
57.80	7.36	-0.10	-0.03	7.23	.90	.92	926	577.9	315.4	12.6
58.00	8.08	-0.09	-0.03	7.96	.86	.87	941	577.9	315.0	12.2
58.20	7.84	-0.08	-0.03	7.73	.87	.88	938	578.0	314.6	11.8
58.40	7.56	-0.07	-0.03	7.46	.89	.90	932	578.1	314.1	11.4
58.60	7.27	-0.07	-0.03	7.18	.91	.92	926	578.1	313.7	11.0
58.80	7.12	-0.06	-0.03	7.04	.92	.93	923	578.2	313.3	10.6
59.00	6.79	-0.05	-0.03	6.71	.95	.96	916	578.3	312.8	10.2
59.20	6.61	-0.04	-0.03	6.54	.96	.97	911	578.4	312.4	9.8
59.40	6.99	-0.03	-0.03	6.93	.93	.94	921	578.4	312.0	9.4
59.60	7.61	-0.02	-0.03	7.56	.89	.90	936	578.5	311.5	9.0
59.80	7.15	-0.01	-0.03	7.11	.91	.92	929	578.6	311.1	8.6
60.00	6.99	0.00	-0.03	6.96	.92	.93	925	578.7	310.6	8.2
60.20	6.74	0.00	-0.03	6.71	.94	.95	920	578.8	310.2	7.8
60.40	6.62	0.00	-0.03	6.60	.95	.96	919	578.9	309.8	7.4
60.60	6.49	0.00	-0.03	6.46	.96	.97	915	578.9	309.3	7.0
60.80	5.74	0.00	-0.03	5.72	-16.02	-16.03	898	579.0	308.9	6.6
61.00	5.53	0.00	-0.03	5.50	.04	.04	893	579.1	308.5	6.2
61.20	4.77	0.00	-0.02	4.75	.10	.11	875	579.2	308.0	5.8
61.40	4.56	0.00	-0.02	4.53	.13	.13	869	579.3	307.6	5.4
61.60	4.71	0.00	-0.02	4.69	.12	.12	872	579.4	307.1	5.0
61.80	4.78	0.00	-0.02	4.76	.11	.12	873	579.5	306.7	4.6
62.00	4.73	0.00	-0.02	4.71	.12	.12	873	579.6	306.3	4.2
62.20	4.66	0.00	-0.02	4.64	.12	.12	872	579.7	305.8	3.7
62.40	4.42	0.00	-0.02	4.40	.15	.15	865	579.8	305.4	3.3
62.60	4.22	0.00	-0.02	4.20	.17	.17	859	579.9	304.9	2.9
62.80	4.32	0.00	-0.02	4.30	.16	.16	862	580.0	304.5	2.5
63.00	4.66	0.00	-0.02	4.63	.13	.13	872	580.1	304.0	2.1
63.20	5.06	0.00	-0.02	5.03	.09	.09	885	580.3	303.6	1.7
63.40	5.28	0.00	-0.02	5.25	.06	.06	894	580.4	303.1	1.3
63.60	5.83	0.00	-0.02	5.81	.01	.00	909	580.5	302.7	0.9
63.80	7.01	0.00	-0.02	6.99	-15.93	-15.92	935	580.6	302.3	0.5
64.00	7.29	0.00	-0.02	7.27	.91	.91	940	580.7	301.8	0.1
64.20	7.54	0.00	-0.02	7.51	.89	.89	946	580.8	301.4	-0.3
64.40	7.25	0.00	-0.02	7.23	.91	.90	942	580.9	300.9	-0.8
64.60	7.18	0.00	-0.02	7.16	.91	.91	941	581.1	300.5	-1.2
64.80	7.15	0.00	-0.02	7.13	.92	.91	939	581.2	300.0	-1.6
65.00	7.81	0.00	-0.02	7.78	.88	.87	954	581.3	299.6	-2.0
65.20	7.55	0.00	-0.02	7.53	.89	.88	950	581.4	299.1	-2.4
65.40	7.09	0.00	-0.02	7.07	.92	.91	941	581.5	298.7	-2.8
65.60	6.97	0.00	-0.02	6.94	.93	.92	937	581.7	298.2	-3.2
65.80	6.63	0.00	-0.02	6.61	.96	.95	930	581.8	297.8	-3.6
66.00	6.26	0.00	-0.02	6.24	.99	.97	923	581.9	297.3	-4.1
66.20	6.14	0.00	-0.02	6.12	.99	.98	921	582.0	296.9	-4.5
66.40	6.02	0.00	-0.02	6.00	-16.00	.99	919	582.2	296.4	-4.9
66.60	5.95	0.00	-0.02	5.93	.01	.99	917	582.3	295.9	-5.3
66.80	5.89	0.00	-0.02	5.87	.01	-16.00	916	582.4	295.5	-5.7
67.00	5.89	0.00	-0.02	5.87	.01	-15.99	917	582.6	295.0	-6.1
67.20	5.87	0.00	-0.02	5.85	.01	.99	918	582.7	294.6	-6.6
67.40	5.85	0.00	-0.02	5.83	.01	.99	918	582.8	294.1	-7.0

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39467.60	5.85	0.00	-0.02	5.83	-16.02	-15.99	918	582.9	293.7	-7.4
67.80	5.91	0.00	-0.02	5.89	.01	.99	920	583.1	293.2	-7.8
68.00	6.09	0.00	-0.02	6.07	.00	.97	925	583.2	292.7	-8.2
68.20	6.18	0.00	-0.02	6.16	-15.98	.96	930	583.3	292.3	-8.7
68.40	6.18	0.00	-0.02	6.16	.98	.96	930	583.5	291.8	-9.1
68.60	6.15	0.00	-0.02	6.13	.99	.96	929	583.6	291.3	-9.5
68.80	6.15	0.00	-0.02	6.13	.99	.96	929	583.7	290.9	-9.9
69.00	6.19	0.00	-0.02	6.17	.98	.96	932	583.9	290.4	-10.3
69.20	6.51	0.00	-0.02	6.49	.96	.93	940	584.0	289.9	-10.8
69.40	6.81	0.00	-0.02	6.79	.94	.91	948	584.1	289.5	-11.2
69.60	7.12	0.00	-0.02	7.10	.91	.88	956	584.3	289.0	-11.6
69.80	7.40	0.00	-0.02	7.38	.90	.87	963	584.4	288.5	-12.0
70.00	7.33	0.00	-0.02	7.31	.90	.87	962	584.6	288.1	-12.4
70.20	7.19	0.00	-0.02	7.18	.90	.87	961	584.7	287.6	-12.9
70.40	7.25	0.00	-0.02	7.23	.90	.87	963	584.8	287.1	-13.3
70.60	6.85	0.00	-0.02	6.83	.93	.89	955	585.0	286.6	-13.7
70.80	6.50	0.00	-0.02	6.48	.95	.91	948	585.1	286.2	-14.1
71.00	6.40	0.00	-0.02	6.38	.95	.92	947	585.2	285.7	-14.5
71.20	6.40	0.00	-0.02	6.38	.95	.92	948	585.4	285.2	-15.0
71.40	6.60	0.00	-0.02	6.58	.94	.90	953	585.5	284.7	-15.4
71.60	6.23	0.00	-0.02	6.22	.96	.92	946	585.6	284.2	-15.8
71.80	5.63	0.00	-0.02	5.61	-16.01	.97	933	585.8	283.7	-16.2
72.00	6.61	0.00	-0.02	6.59	-15.94	.90	955	585.9	283.3	-16.7
72.20	8.82	0.00	-0.02	8.80	.81	.77	1000	586.0	282.8	-17.1
72.40	9.32	0.00	-0.02	9.30	.78	.74	1011	586.2	282.3	-17.5
72.60	10.88	0.00	-0.02	10.86	.71	.67	1038	586.3	281.8	-17.9
72.80	10.48	0.00	-0.02	10.46	.72	.68	1032	586.5	281.3	-18.4
73.00	9.74	0.00	-0.02	9.72	.76	.71	1021	586.6	280.8	-18.8
73.20	10.48	0.00	-0.02	10.47	.73	.68	1032	586.7	280.3	-19.2
73.40	11.17	0.00	-0.02	11.15	.70	.65	1044	586.9	279.8	-19.6
39473.60	13.39	0.00	-0.02	13.37	-15.62	-15.57	1075	587.0	279.3	-20.1
73.70	15.17	0.00	-0.02	15.15	.56	.52	1098	587.1	279.1	-20.3
73.80	14.69	0.00	-0.02	14.68	.57	.53	1095	587.1	278.8	-20.5
73.90	13.60	0.00	-0.02	13.58	.60	.56	1084	587.2	278.6	-20.7
74.00	11.81	0.00	-0.02	11.80	.66	.62	1060	587.3	278.3	-20.9
74.10	10.54	0.00	-0.02	10.52	.71	.67	1040	587.3	278.1	-21.1
74.20	10.47	0.00	-0.02	10.45	.72	.67	1039	587.4	277.8	-21.3
74.30	10.03	0.00	-0.02	10.01	.74	.69	1032	587.5	277.6	-21.6
39474.50	8.51	0.00	-0.02	8.49	-15.81	-15.76	1005	587.6	277.0	-22.0
74.75	7.72	0.00	-0.02	7.71	.86	.81	990	587.8	276.4	-22.5
75.00	7.27	0.00	-0.02	7.25	.88	.83	982	587.9	275.8	-23.0
75.25	6.83	0.00	-0.02	6.82	.91	.86	974	588.1	275.1	-23.6
75.50	6.78	0.00	-0.02	6.76	.92	.86	973	588.2	274.5	-24.1
75.75	6.50	0.00	-0.02	6.49	.93	.88	967	588.4	273.8	-24.7
76.00	6.34	0.00	-0.02	6.33	.94	.89	965	588.6	273.2	-25.2
76.25	6.46	0.00	-0.02	6.44	.94	.88	968	588.7	272.5	-25.7
76.50	6.46	0.00	-0.02	6.44	.94	.88	968	588.9	271.8	-26.3
76.75	6.36	0.00	-0.02	6.34	.95	.88	966	589.0	271.2	-26.8
77.00	6.78	0.00	-0.02	6.77	.91	.85	977	589.2	270.5	-27.3
77.25	7.06	0.00	-0.02	7.04	.90	.83	983	589.3	269.8	-27.9
77.50	7.00	0.00	-0.02	6.98	.90	.84	982	589.5	269.1	-28.4
77.75	6.86	0.00	-0.02	6.84	.91	.85	979	589.6	268.4	-29.0
78.00	6.54	0.00	-0.02	6.52	.94	.87	972	589.8	267.7	-29.5
78.25	5.94	0.00	-0.02	5.92	.98	.91	959	589.9	267.0	-30.0
78.50	5.61	0.00	-0.02	5.60	-16.01	.93	951	590.1	266.3	-30.6
78.75	5.36	0.00	-0.02	5.34	.03	.96	944	590.2	265.6	-31.1
79.00	5.20	0.00	-0.02	5.18	.04	.97	941	590.3	264.9	-31.7
79.25	5.27	0.00	-0.02	5.25	.03	.96	944	590.5	264.1	-32.2

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39479.50	5.38	0.00	-0.02	5.36	-16.03	-15.95	947	590.6	263.4	-32.7
79.75	5.57	0.00	-0.02	5.55	.01	.93	954	590.7	262.7	-33.3
80.00	5.72	0.00	-0.02	5.70	-15.98	.91	961	590.9	261.9	-33.8
80.25	5.76	0.00	-0.02	5.74	.98	.90	964	591.0	261.2	-34.3
80.50	5.84	0.00	-0.02	5.82	.97	.90	966	591.1	260.4	-34.9
80.75	6.08	0.00	-0.02	6.06	.96	.88	971	591.3	259.6	-35.4
81.00	6.55	0.00	-0.02	6.53	.92	.84	983	591.4	258.8	-35.9
81.25	6.97	0.00	-0.02	6.95	.90	.82	994	591.5	258.0	-36.5
81.50	6.41	0.00	-0.02	6.39	.93	.85	982	591.6	257.2	-37.0
81.75	6.17	0.00	-0.02	6.15	.95	.87	978	591.7	256.4	-37.6
82.00	5.75	0.00	-0.02	5.73	.97	.89	969	591.8	255.5	-38.1
82.25	5.06	0.00	-0.02	5.03	-16.03	.95	951	592.0	254.7	-38.6
82.50	5.26	0.00	-0.02	5.24	.02	.93	956	592.1	253.8	-39.2
82.75	5.44	0.00	-0.02	5.42	.00	.92	961	592.2	253.0	-39.7
83.00	5.65	0.00	-0.02	5.63	-15.98	.90	968	592.3	252.1	-40.2
83.25	5.63	0.00	-0.02	5.61	.98	.90	969	592.4	251.2	-40.8
83.50	5.72	0.00	-0.02	5.70	.97	.89	973	592.5	250.2	-41.3
83.75	5.84	0.00	-0.02	5.81	.96	.88	976	592.6	249.3	-41.8
84.00	5.97	0.00	-0.02	5.95	.96	.87	978	592.6	248.3	-42.4
84.25	6.11	0.00	-0.02	6.08	.95	.86	983	592.7	247.4	-42.9
84.50	6.19	0.00	-0.02	6.16	.94	.85	986	592.8	246.4	-43.4
84.75	6.32	0.00	-0.02	6.29	.93	.84	990	592.9	245.3	-44.0
85.00	6.54	0.00	-0.02	6.52	.91	.82	996	593.0	244.3	-44.5
85.25	7.30	0.00	-0.02	7.28	.86	.77	1014	593.1	243.2	-45.0
85.50	8.04	0.00	-0.02	8.02	.82	.73	1030	593.1	242.1	-45.5
85.75	7.62	0.00	-0.02	7.60	.84	.75	1023	593.2	240.9	-46.0
86.00	7.72	0.00	-0.02	7.70	.83	.74	1026	593.3	239.8	-46.6
86.25	7.80	0.00	-0.03	7.78	.83	.74	1028	593.3	238.6	-47.1
86.50	8.08	0.00	-0.03	8.06	.81	.72	1034	593.4	237.3	-47.6
86.75	8.05	0.00	-0.03	8.02	.81	.72	1034	593.4	236.0	-48.1
39487.00	7.02	0.00	-0.03	6.99	-15.87	-15.78	1013	593.5	234.7	-48.6
87.20	6.00	0.00	-0.03	5.97	.94	.85	989	593.5	233.6	-49.0
87.40	6.03	0.00	-0.03	6.00	.94	.85	989	593.6	232.5	-49.4
87.60	6.32	0.00	-0.03	6.30	.92	.83	995	593.6	231.3	-49.8
87.80	6.45	0.00	-0.03	6.43	.91	.82	1000	593.6	230.1	-50.2
88.00	6.37	0.00	-0.03	6.35	.92	.83	998	593.6	228.9	-50.6
88.20	5.81	0.00	-0.03	5.79	.96	.87	984	593.7	227.6	-51.0
88.40	5.50	0.00	-0.03	5.47	.99	.89	976	593.7	226.3	-51.4
88.60	5.39	0.00	-0.03	5.37	.99	.90	973	593.7	224.9	-51.8
88.80	5.39	0.00	-0.03	5.36	-16.00	.90	973	593.7	223.5	-52.1
89.00	5.56	0.00	-0.03	5.53	-15.98	.89	976	593.8	222.0	-52.5
89.20	5.87	0.00	-0.03	5.84	.96	.87	984	593.8	220.5	-52.9
89.40	6.11	0.00	-0.03	6.08	.94	.85	990	593.8	218.9	-53.2
89.60	6.25	0.00	-0.03	6.22	.93	.84	994	593.8	217.3	-53.6
89.80	6.36	0.00	-0.03	6.33	.92	.83	997	593.8	215.6	-54.0
90.00	6.50	0.00	-0.03	6.47	.91	.82	1001	593.8	213.8	-54.3
90.20	6.68	0.00	-0.03	6.65	.91	.81	1004	593.8	212.0	-54.6
90.40	6.97	0.00	-0.03	6.93	.89	.79	1010	593.8	210.0	-55.0
90.60	7.26	0.00	-0.03	7.23	.87	.77	1017	593.8	208.0	-55.3
90.80	7.72	0.00	-0.03	7.68	.84	.75	1027	593.8	205.9	-55.6
91.00	7.49	0.00	-0.03	7.46	.85	.76	1022	593.8	203.8	-55.9
91.20	7.70	0.00	-0.03	7.67	.84	.75	1027	593.8	201.5	-56.2
91.40	8.87	0.00	-0.03	8.84	.78	.68	1052	593.8	199.1	-56.5
91.60	10.21	0.00	-0.03	10.18	.71	.62	1076	593.7	196.6	-56.7
91.80	11.71	0.00	-0.03	11.68	.65	.56	1102	593.7	194.1	-57.0
92.00	13.41	0.00	-0.03	13.37	.59	.50	1127	593.7	191.4	-57.2
92.20	11.38	0.00	-0.03	11.35	.66	.58	1096	593.7	188.7	-57.4
92.40	11.06	0.00	-0.03	11.03	.68	.59	1091	593.6	185.8	-57.6
92.60	11.18	0.00	-0.03	11.15	.68	.59	1092	593.6	182.8	-57.8

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39492.80	10.97	0.00	-0.03	10.94	-15.68	-15.59	1088	593.6	179.8	-58.0
93.00	11.13	0.00	-0.03	11.09	.68	.59	1091	593.5	176.7	-58.1
93.20	11.37	0.00	-0.03	11.34	.67	.58	1096	593.5	173.5	-58.2
93.40	11.60	0.00	-0.03	11.56	.66	.57	1099	593.5	170.3	-58.4
93.60	12.03	0.00	-0.03	12.00	.64	.55	1107	593.4	167.0	-58.4
93.80	12.15	0.00	-0.03	12.12	.63	.55	1110	593.4	163.7	-58.5
94.00	11.85	0.00	-0.03	11.82	.64	.56	1105	593.3	160.4	-58.5
94.20	11.54	0.00	-0.03	11.50	.66	.57	1099	593.3	157.1	-58.5
94.40	11.70	0.00	-0.03	11.67	.65	.57	1101	593.2	153.7	-58.5
94.60	11.50	0.00	-0.04	11.46	.66	.58	1098	593.2	150.4	-58.5
94.80	11.70	0.00	-0.04	11.67	.65	.57	1101	593.1	147.2	-58.5
95.00	12.03	0.00	-0.04	11.99	.64	.56	1107	593.0	144.0	-58.4
95.20	12.25	0.00	-0.04	12.21	.63	.55	1110	593.0	140.8	-58.3
95.40	12.64	0.00	-0.04	12.60	.62	.54	1116	592.9	137.7	-58.2
95.60	13.08	0.00	-0.04	13.04	.60	.52	1122	592.8	134.7	-58.1
95.80	12.98	0.00	-0.04	12.95	.61	.53	1121	592.7	131.8	-57.9
96.00	13.11	0.00	-0.04	13.07	.60	.52	1123	592.7	129.0	-57.7
96.20	13.27	0.00	-0.04	13.23	.60	.52	1125	592.6	126.3	-57.6
96.40	13.28	0.00	-0.04	13.25	.59	.52	1126	592.5	123.7	-57.4
96.60	12.85	0.00	-0.04	12.81	.61	.53	1120	592.4	121.2	-57.1
96.80	12.55	0.00	-0.04	12.51	.62	.54	1115	592.3	118.7	-56.9
97.00	12.82	0.00	-0.04	12.78	.61	.53	1119	592.2	116.4	-56.7
97.20	13.53	0.00	-0.04	13.49	.59	.51	1129	592.1	114.2	-56.4
97.40	17.61	0.00	-0.04	17.57	.47	.40	1180	592.0	112.0	-56.2
97.60	20.43	0.00	-0.04	20.39	.40	.33	1213	591.9	110.0	-55.9
97.80	21.16	0.00	-0.04	21.12	.39	.32	1222	591.8	108.0	-55.6
98.00	24.63	0.00	-0.04	24.59	.32	.25	1256	591.7	106.1	-55.3
98.20	23.64	0.00	-0.04	23.60	.34	.27	1247	591.6	104.3	-55.0
39498.40	23.48	0.00	-0.04	23.44	-15.34	-15.28	1246	591.5	102.5	-54.7
98.50	24.00	0.00	-0.04	23.96	.33	.27	1251	591.5	101.6	-54.6
98.60	24.81	0.00	-0.04	24.77	.32	.25	1258	591.4	100.8	-54.4
98.70	22.14	0.00	-0.04	22.10	.37	.30	1231	591.3	100.0	-54.2
98.80	20.13	0.00	-0.04	20.09	.41	.35	1209	591.3	99.2	-54.1
98.90	18.39	0.00	-0.04	18.35	.45	.39	1189	591.2	98.4	-53.9
99.00	16.56	0.00	-0.04	16.52	.50	.43	1168	591.2	97.6	-53.8
39499.25	14.64	0.00	-0.04	14.60	-15.55	-15.49	1142	591.0	95.8	-53.3
99.50	13.91	0.00	-0.04	13.86	.57	.51	1132	590.9	94.0	-52.9
99.75	13.45	0.00	-0.04	13.41	.59	.52	1126	590.7	92.2	-52.5
39500.00	12.87	0.00	-0.04	12.82	.60	.54	1118	590.5	90.6	-52.0
00.25	12.55	0.00	-0.04	12.51	.61	.55	1114	590.4	89.0	-51.6
00.50	12.34	0.00	-0.04	12.30	.62	.55	1111	590.2	87.5	-51.2
00.75	12.19	0.00	-0.04	12.14	.62	.56	1110	590.0	86.1	-50.7
01.00	12.41	0.00	-0.04	12.36	.60	.54	1117	589.8	84.6	-50.2
01.25	13.02	0.00	-0.04	12.97	.57	.52	1129	589.6	83.3	-49.8
01.50	13.03	0.00	-0.04	12.98	.57	.51	1133	589.5	82.0	-49.3
01.75	13.14	0.00	-0.05	13.09	.55	.50	1138	589.3	80.7	-48.8
02.00	12.92	0.00	-0.05	12.88	.55	.50	1138	589.1	79.5	-48.4
02.25	12.75	0.00	-0.05	12.70	.55	.49	1138	588.9	78.3	-47.9
02.50	12.59	0.00	-0.05	12.54	.54	.49	1139	588.7	77.1	-47.4
02.75	11.44	0.00	-0.05	11.40	.57	.52	1125	588.5	76.0	-46.9
03.00	11.20	0.00	-0.05	11.16	.52	.47	1126	588.2	74.9	-46.5
03.25	12.16	0.00	-0.05	12.11	.52	.47	1148	588.0	73.8	-46.0
03.50	15.75	-0.02	-0.05	15.69	.39	.34	1207	587.8	72.8	-45.5
39503.70	19.24	-0.06	-0.05	19.14	-15.29	-15.25	1256	587.6	72.0	-45.1
03.80	20.18	-0.08	-0.05	20.06	.27	.22	1271	587.6	71.6	-44.9
03.90	22.11	-0.10	-0.05	21.96	.22	.18	1296	587.5	71.2	-44.7
04.00	25.52	-0.11	-0.05	25.36	.15	.11	1334	587.4	70.8	-44.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_a$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39504.10	23.81	-0.13	-0.05	23.63	-15.18	-15.13	1320	587.3	70.4	-44.3
04.20	24.58	-0.14	-0.05	24.38	.16	.12	1333	587.2	70.0	-44.1
04.30	27.08	-0.16	-0.05	26.87	.11	.08	1362	587.1	69.6	-43.9
04.40	28.19	-0.17	-0.05	27.98	.09	.06	1377	587.0	69.3	-43.7
04.50	20.19	-0.18	-0.05	19.96	.23	.19	1296	586.9	68.9	-43.5
39504.60	16.84	-0.19	-0.05	16.60	-15.30	-15.26	1257	586.8	68.5	-43.4
04.80	11.45	-0.22	-0.05	11.19	.45	.41	1180	586.6	67.8	-43.0
05.00	10.73	-0.24	-0.05	10.44	.46	.42	1171	586.5	67.1	-42.6
05.20	12.21	-0.26	-0.05	11.90	.38	.34	1204	586.3	66.3	-42.2
05.40	11.49	-0.27	-0.05	11.17	.39	.35	1199	586.1	65.6	-41.8
05.60	11.31	-0.29	-0.05	10.98	.68	.64	1076	585.9	65.0	-41.4
05.80	11.26	-0.30	-0.05	10.91	.68	.64	1075	585.7	64.3	-41.0
06.00	11.27	-0.31	-0.05	10.91	.68	.64	1074	585.5	63.6	-40.6
39506.25	11.26	-0.32	-0.05	10.89	-15.68	-15.65	1073	585.2	62.8	-40.2
06.50	11.22	-0.33	-0.05	10.83	.68	.65	1071	585.0	62.0	-39.7
06.75	11.17	-0.35	-0.05	10.78	.69	.66	1069	584.7	61.1	-39.2
07.00	10.98	-0.35	-0.05	10.58	.70	.67	1064	584.5	60.4	-38.7
07.25	10.73	-0.37	-0.05	10.31	.71	.68	1058	584.2	59.6	-38.2
07.50	10.34	-0.37	-0.05	9.91	.73	.70	1050	584.0	58.8	-37.7
07.75	10.14	-0.38	-0.05	9.71	.74	.72	1045	583.7	58.0	-37.2
08.00	9.92	-0.39	-0.05	9.49	.75	.73	1040	583.4	57.3	-36.8
08.25	9.83	-0.39	-0.05	9.39	.75	.73	1038	583.2	56.5	-36.3
08.50	9.77	-0.39	-0.05	9.32	.76	.74	1036	582.9	55.8	-35.8
08.75	9.54	-0.40	-0.05	9.09	.77	.75	1031	582.6	55.1	-35.3
09.00	9.43	-0.40	-0.05	8.98	.77	.76	1028	582.4	54.3	-34.8
09.25	8.92	-0.40	-0.05	8.47	.80	.79	1018	582.1	53.6	-34.3
09.50	10.58	-0.40	-0.05	10.12	.72	.71	1046	581.8	52.9	-33.8
09.75	11.13	-0.41	-0.05	10.67	.70	.69	1054	581.5	52.2	-33.3
10.00	11.52	-0.41	-0.05	11.06	.68	.68	1060	581.2	51.5	-32.8
10.25	11.97	-0.41	-0.05	11.51	.67	.66	1067	581.0	50.8	-32.4
10.50	12.91	-0.41	-0.05	12.45	.63	.63	1080	580.7	50.1	-31.9
10.75	13.97	-0.41	-0.05	13.52	.59	.59	1095	580.4	49.5	-31.4
11.00	14.74	-0.41	-0.05	14.28	.57	.57	1105	580.1	48.8	-30.9
11.25	15.21	-0.41	-0.05	14.76	.55	.55	1110	579.8	48.1	-30.4
11.50	15.74	-0.41	-0.05	15.29	.54	.54	1117	579.5	47.5	-29.9
11.75	15.81	-0.41	-0.05	15.36	.53	.54	1117	579.3	46.8	-29.4
12.00	15.72	-0.41	-0.05	15.27	.53	.54	1115	579.0	46.2	-28.9
12.25	15.88	-0.41	-0.05	15.43	.53	.54	1117	578.7	45.5	-28.4
12.50	16.19	-0.40	-0.05	15.74	.52	.53	1121	578.4	44.9	-27.9
12.75	16.65	-0.40	-0.05	16.21	.51	.52	1126	578.1	44.2	-27.4
13.00	17.14	-0.40	-0.04	16.70	.49	.50	1132	577.8	43.6	-26.9
13.25	17.58	-0.39	-0.04	17.14	.48	.49	1137	577.5	42.9	-26.4
13.50	17.82	-0.39	-0.04	17.38	.47	.49	1140	577.2	42.3	-25.9
13.75	18.32	-0.39	-0.04	17.89	.46	.47	1145	576.9	41.7	-25.4
14.00	18.81	-0.38	-0.04	18.38	.44	.46	1150	576.7	41.1	-24.9
14.25	18.97	-0.38	-0.04	18.55	.44	.46	1152	576.4	40.4	-24.4
14.50	19.25	-0.38	-0.04	18.83	.43	.45	1155	576.1	39.8	-23.9
14.75	19.84	-0.37	-0.04	19.43	.41	.44	1161	575.8	39.2	-23.4
15.00	20.57	-0.37	-0.04	20.16	.40	.42	1169	575.5	38.6	-22.9
15.25	21.29	-0.36	-0.04	20.88	.38	.41	1176	575.2	38.0	-22.5
15.50	22.11	-0.35	-0.04	21.72	.36	.39	1185	574.9	37.4	-22.0
15.75	22.77	-0.35	-0.04	22.38	.34	.38	1191	574.6	36.8	-21.5
16.00	23.33	-0.34	-0.04	22.94	.33	.37	1196	574.3	36.2	-21.0
16.25	23.67	-0.34	-0.04	23.29	.32	.36	1199	574.0	35.6	-20.5
16.50	23.98	-0.33	-0.03	23.61	.32	.35	1202	573.8	35.0	-20.0
16.75	24.29	-0.33	-0.04	23.92	.31	.35	1205	573.5	34.4	-19.5
17.00	24.39	-0.32	-0.04	24.03	.31	.35	1205	573.2	33.8	-19.0
17.25	24.76	-0.32	-0.04	24.40	.30	.34	1208	572.9	33.2	-18.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39517.50	25.19	-0.31	-0.04	24.84	-15.29	-15.33	1212	572.6	32.6	-18.0
17.75	25.90	-0.30	-0.03	25.56	.28	.32	1218	572.3	32.0	-17.5
18.00	26.71	-0.30	-0.03	26.38	.26	.31	1225	572.1	31.5	-17.0
18.25	29.78	-0.29	-0.03	29.45	.21	.26	1251	571.8	30.9	-16.5
18.50	30.04	-0.29	-0.03	29.71	.21	.26	1252	571.5	30.3	-16.0
18.75	28.75	-0.28	-0.03	28.43	.23	.28	1241	571.2	29.7	-15.5
19.00	28.87	-0.28	-0.03	28.56	.23	.28	1240	570.9	29.2	-15.0
19.25	28.60	-0.27	-0.03	28.30	.24	.30	1230	570.7	28.6	-14.6
19.50	28.73	-0.26	-0.03	28.44	.24	.30	1229	570.4	28.0	-14.1
19.75	28.89	-0.26	-0.03	28.60	.24	.30	1229	570.1	27.5	-13.6
20.00	28.76	-0.25	-0.03	28.48	.24	.30	1226	569.9	26.9	-13.1
20.25	28.83	-0.24	-0.03	28.56	.24	.30	1225	569.6	26.3	-12.7
20.50	28.98	-0.24	-0.03	28.71	.24	.30	1225	569.3	25.8	-12.2
20.75	29.12	-0.23	-0.03	28.86	.24	.30	1224	569.1	25.2	-11.7
21.00	29.15	-0.22	-0.03	28.90	.24	.31	1223	568.8	24.6	-11.2
21.25	29.12	-0.21	-0.02	28.88	.24	.31	1221	568.5	24.1	-10.7
21.50	29.42	-0.21	-0.02	29.19	.24	.31	1222	568.3	23.5	-10.2
21.75	29.85	-0.20	-0.02	29.63	.23	.30	1224	568.0	23.0	-9.8
22.00	30.44	-0.19	-0.02	30.23	.23	.30	1227	567.8	22.4	-9.3
22.25	31.02	-0.18	-0.02	30.82	.22	.29	1230	567.5	21.9	-8.8
22.50	31.05	-0.18	-0.02	30.85	.22	.29	1229	567.3	21.3	-8.3
22.75	30.97	-0.17	-0.02	30.79	.22	.29	1227	567.0	20.8	-7.8
23.00	29.19	-0.16	-0.02	29.02	.25	.32	1212	566.8	20.2	-7.4
23.25	28.78	-0.15	-0.02	28.62	.26	.33	1207	566.6	19.7	-6.9
23.50	28.86	-0.14	-0.02	28.70	.25	.33	1206	566.3	19.1	-6.4
23.75	28.95	-0.13	-0.01	28.81	.25	.33	1206	566.1	18.6	-5.9
24.00	29.03	-0.12	-0.01	28.89	.25	.33	1206	565.9	18.0	-5.4
24.25	28.84	-0.12	0.00	28.73	.26	.34	1203	565.7	17.5	-4.9
24.50	29.09	-0.11	0.00	28.98	.25	.34	1204	565.4	16.9	-4.5
24.75	29.49	-0.10	0.00	29.39	.25	.33	1206	565.2	16.4	-4.0
25.00	29.87	-0.09	0.00	29.78	.24	.33	1209	565.0	15.8	-3.5
25.25	30.13	-0.08	0.00	30.05	.24	.32	1210	564.8	15.3	-3.0
25.50	30.56	-0.07	0.00	30.49	.23	.32	1213	564.6	14.8	-2.5
39525.60	30.61	-0.07	-0.01	30.53	-15.23	-15.32	1213	564.5	14.5	-2.3
25.70	30.79	-0.07	-0.01	30.71	.22	.31	1214	564.4	14.3	-2.2
25.80	31.71	-0.07	-0.01	31.64	.21	.30	1221	564.3	14.1	-2.0
25.90	32.87	-0.06	-0.01	32.81	.20	.29	1229	564.3	13.9	-1.8
26.00	33.05	-0.06	-0.01	32.99	.19	.28	1230	564.2	13.7	-1.6
26.10	33.97	-0.06	-0.01	33.90	.18	.27	1236	564.1	13.5	-1.4
26.20	35.62	-0.05	0.00	35.56	.16	.25	1248	564.0	13.2	-1.2
26.30	35.54	-0.05	0.00	35.49	.16	.25	1247	563.9	13.0	-1.0
26.40	34.60	-0.05	0.00	34.55	.17	.26	1240	563.9	12.8	-0.8
26.50	34.15	-0.04	0.00	34.10	.18	.27	1237	563.8	12.6	-0.6
39526.60	32.87	-0.04	0.00	32.82	-15.19	-15.29	1227	563.7	12.4	-0.4
26.80	32.30	-0.03	0.00	32.26	.20	.30	1222	563.6	11.9	0.0
27.00	32.30	-0.03	0.00	32.27	.20	.30	1222	563.4	11.5	0.4
27.20	32.30	-0.02	0.00	32.28	.20	.30	1221	563.3	11.1	0.7
27.40	32.11	-0.01	0.00	32.10	.20	.30	1219	563.1	10.7	1.1
27.60	31.54	-0.01	0.00	31.53	.21	.31	1214	563.0	10.2	1.5
27.80	31.86	0.00	0.00	31.86	.21	.31	1216	562.8	9.8	1.9
28.00	32.97	0.01	0.00	32.97	.19	.29	1224	562.7	9.4	2.3
28.20	33.82	0.01	0.00	33.84	.18	.28	1229	562.6	8.9	2.7
28.40	34.14	0.02	0.00	34.16	.18	.28	1231	562.4	8.5	3.1
28.60	34.40	0.03	0.00	34.43	.17	.28	1232	562.3	8.1	3.4
39528.80	35.84	0.03	0.01	35.88	-15.15	-15.26	1242	562.2	7.7	3.8
28.90	42.24	0.03	0.01	42.28	.08	.18	1284	562.1	7.5	4.0
29.00	51.95	0.04	0.01	51.99	-14.99	.09	1341	562.1	7.2	4.2

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39529.10	54.65	0.04	0.01	54.69	-14.97	-15.06	1355	562.0	7.0	4.4
29.20	51.93	0.04	0.01	51.98	.99	.09	1340	561.9	6.8	4.6
29.30	48.84	0.05	0.01	48.90	-15.02	.11	1322	561.9	6.6	4.8
29.40	44.28	0.05	0.01	44.34	.06	.16	1295	561.8	6.4	5.0
39529.60	40.56	0.06	0.01	40.62	-15.10	-15.20	1271	561.7	6.0	5.4
29.80	40.15	0.06	0.01	40.22	.10	.20	1267	561.6	5.5	5.7
30.00	40.26	0.07	0.01	40.34	.10	.20	1267	561.5	5.1	6.1
30.20	34.46	0.08	0.01	34.55	.17	.27	1227	561.4	4.7	6.5
39530.50	31.39	0.09	0.01	31.49	-15.22	-15.33	1200	561.2	4.0	7.1
30.75	30.44	0.10	0.01	30.56	.23	.35	1192	561.1	3.5	7.6
31.00	29.76	0.11	0.01	29.88	.25	.36	1185	561.0	3.0	8.0
31.25	29.07	0.12	0.01	29.21	.26	.37	1179	560.9	2.5	8.5
31.50	28.42	0.13	0.02	28.57	.27	.38	1173	560.7	1.9	9.0
31.75	27.87	0.14	0.02	28.02	.28	.39	1168	560.6	1.4	9.5
32.00	27.31	0.15	0.02	27.48	.29	.40	1162	560.5	0.9	10.0
32.25	26.89	0.16	0.02	27.07	.29	.41	1158	560.4	0.3	10.4
32.50	26.45	0.17	0.02	26.64	.30	.41	1155	560.3	359.8	10.9
32.75	25.73	0.18	0.02	25.92	.31	.42	1149	560.3	359.3	11.4
33.00	24.97	0.19	0.02	25.18	.32	.44	1142	560.2	358.8	11.9
33.25	23.42	0.20	0.02	23.64	.35	.47	1128	560.1	358.2	12.3
33.50	22.12	0.20	0.02	22.35	.38	.50	1116	560.0	357.7	12.8
33.75	21.34	0.21	0.02	21.57	.39	.51	1108	559.9	357.2	13.3
34.00	21.42	0.22	0.03	21.66	.39	.51	1109	559.9	356.7	13.8
34.25	21.58	0.22	0.03	21.83	.38	.51	1111	559.8	356.1	14.3
34.50	21.95	0.23	0.03	22.21	.37	.50	1114	559.8	355.6	14.7
34.75	22.90	0.24	0.03	23.17	.35	.48	1123	559.7	355.1	15.2
35.00	24.08	0.25	0.03	24.36	.33	.45	1134	559.6	354.5	15.7
35.25	25.14	0.26	0.03	25.42	.31	.43	1143	559.6	354.0	16.2
35.50	24.24	0.27	0.03	24.55	.32	.45	1136	559.6	353.5	16.7
35.75	22.70	0.28	0.03	23.01	.35	.48	1123	559.5	353.0	17.1
36.00	22.08	0.29	0.03	22.41	.36	.49	1117	559.5	352.4	17.6
36.25	21.50	0.30	0.03	21.84	.37	.50	1112	559.5	351.9	18.1
36.50	21.07	0.30	0.04	21.41	.38	.51	1108	559.4	351.4	18.6
36.75	19.95	0.31	0.04	20.30	.40	.54	1097	559.4	350.9	19.1
39537.00	17.79	0.32	0.04	18.15	-15.45	-15.58	1076	559.4	350.3	19.5
37.20	29.31	0.32	0.04	29.67	.23	.36	1178	559.4	349.9	19.9
37.40	28.46	0.33	0.04	28.83	.24	.37	1172	559.4	349.5	20.3
37.60	30.26	0.34	0.04	30.64	.22	.33	1186	559.4	349.1	20.7
37.80	39.77	0.34	0.04	40.15	.10	.21	1251	559.4	348.6	21.1
38.00	30.70	0.35	0.04	31.10	.21	.33	1189	559.4	348.2	21.4
38.20	24.68	0.36	0.04	25.08	.31	.43	1138	559.4	347.8	21.8
38.40	21.91	0.36	0.04	22.31	.36	.49	1113	559.4	347.4	22.2
38.60	20.92	0.37	0.04	21.33	.38	.51	1104	559.4	347.0	22.6
38.80	20.08	0.37	0.04	20.50	.40	.53	1095	559.4	346.5	22.9
39.00	19.24	0.38	0.04	19.67	.42	.55	1087	559.4	346.1	23.3
39.20	18.51	0.39	0.05	18.95	.44	.56	1079	559.5	345.7	23.7
39.40	17.96	0.39	0.05	18.40	.45	.58	1073	559.5	345.3	24.1
39.60	17.45	0.40	0.05	17.90	.46	.59	1067	559.5	344.9	24.5
39.80	17.01	0.41	0.05	17.47	.48	.61	1062	559.5	344.4	24.8
40.00	16.56	0.41	0.05	17.02	.49	.62	1056	559.6	344.0	25.2
40.20	16.25	0.42	0.05	16.72	.50	.63	1052	559.6	343.6	25.6
40.40	16.13	0.42	0.05	16.61	.50	.64	1050	559.6	343.2	26.0
40.60	16.01	0.43	0.05	16.49	.50	.63	1049	559.7	342.7	26.3
40.80	15.97	0.44	0.05	16.46	.50	.63	1050	559.7	342.3	26.7
41.00	16.19	0.44	0.05	16.69	.50	.62	1052	559.7	341.9	27.1
41.20	16.24	0.45	0.05	16.75	.50	.63	1051	559.8	341.5	27.5
41.40	16.31	0.46	0.05	16.82	.50	.63	1051	559.8	341.0	27.9

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39541.60	16.41	0.46	0.05	16.92	-15.50	-15.62	1052	559.9	340.6	28.2
41.80	16.51	0.47	0.05	17.03	.49	.62	1052	559.9	340.2	28.6
42.00	16.64	0.47	0.06	17.17	.49	.62	1054	560.0	339.8	29.0
42.20	16.86	0.48	0.06	17.39	.49	.61	1056	560.0	339.4	29.4
42.40	17.01	0.49	0.06	17.55	.48	.61	1056	560.1	338.9	29.8
42.60	17.20	0.49	0.06	17.75	.48	.61	1058	560.1	338.5	30.1
42.80	17.47	0.50	0.06	18.03	.47	.59	1062	560.2	338.1	30.5
43.00	17.84	0.50	0.06	18.40	.46	.59	1065	560.2	337.6	30.9
43.20	18.43	0.51	0.06	19.00	.45	.57	1071	560.3	337.2	31.3
43.40	19.02	0.51	0.06	19.60	.44	.56	1076	560.4	336.8	31.6
43.60	20.19	0.52	0.06	20.77	.41	.54	1086	560.4	336.4	32.0
43.80	21.51	0.52	0.06	22.09	.39	.51	1098	560.5	335.9	32.4
44.00	22.26	0.53	0.06	22.85	.37	.49	1105	560.6	335.5	32.8
44.20	21.24	0.53	0.06	21.83	.39	.51	1096	560.7	335.1	33.2
44.40	20.53	0.54	0.06	21.13	.41	.53	1089	560.7	334.7	33.5
44.60	20.77	0.54	0.06	21.38	.40	.52	1091	560.8	334.2	33.9
44.80	21.51	0.55	0.06	22.12	.38	.50	1098	560.9	333.8	34.3
45.00	21.82	0.55	0.06	22.43	.38	.49	1101	561.0	333.4	34.7
45.20	20.36	0.56	0.06	20.98	.41	.53	1086	561.0	332.9	35.0
45.40	18.44	0.56	0.06	19.06	.46	.58	1066	561.1	332.5	35.4
45.60	16.50	0.57	0.06	17.13	.50	.62	1047	561.2	332.1	35.8
45.80	16.01	0.57	0.07	16.65	.52	.63	1041	561.3	331.6	36.2
46.00	16.35	0.57	0.07	16.99	.51	.62	1045	561.4	331.2	36.5
46.20	16.28	0.58	0.07	16.93	.51	.62	1044	561.5	330.8	36.9
46.40	17.22	0.58	0.07	17.86	.48	.60	1055	561.6	330.3	37.3
46.60	17.18	0.58	0.07	17.83	.48	.59	1055	561.7	329.9	37.7
46.80	17.82	0.59	0.07	18.48	.47	.58	1061	561.8	329.5	38.1
47.00	17.92	0.59	0.07	18.58	.46	.57	1062	561.9	329.0	38.4
47.20	18.22	0.60	0.07	18.89	.46	.57	1065	562.0	328.6	38.8
47.40	17.66	0.60	0.07	18.33	.47	.58	1060	562.1	328.1	39.2
47.60	16.94	0.60	0.07	17.61	.49	.60	1052	562.2	327.7	39.6
47.80	16.72	0.61	0.07	17.40	.50	.61	1049	562.3	327.3	39.9
48.00	16.46	0.61	0.07	17.14	.50	.61	1046	562.4	326.8	40.3
48.20	16.42	0.61	0.07	17.10	.51	.61	1045	562.5	326.4	40.7
48.40	16.42	0.62	0.07	17.11	.51	.61	1045	562.6	325.9	41.1
48.60	16.39	0.62	0.07	17.08	.50	.61	1046	562.7	325.5	41.4
48.80	16.14	0.62	0.07	16.83	.51	.62	1043	562.8	325.0	41.8
49.00	15.98	0.62	0.07	16.67	.51	.62	1042	562.9	324.6	42.2
49.20	15.87	0.63	0.07	16.57	.52	.62	1040	563.0	324.2	42.6
49.40	15.81	0.63	0.07	16.51	.52	.63	1039	563.1	323.7	42.9
49.60	15.86	0.63	0.07	16.56	.52	.62	1040	563.3	323.3	43.3
49.80	15.98	0.63	0.07	16.68	.51	.62	1042	563.4	322.8	43.7
50.00	16.54	0.63	0.07	17.24	.50	.60	1047	563.5	322.4	44.1
50.20	17.27	0.63	0.07	17.98	.48	.58	1056	563.6	321.9	44.4
50.40	17.88	0.64	0.07	18.59	.47	.57	1062	563.7	321.5	44.8
50.60	18.73	0.64	0.07	19.44	.45	.55	1070	563.8	321.0	45.2
50.80	19.07	0.64	0.07	19.78	.44	.54	1074	564.0	320.5	45.6
51.00	19.07	0.64	0.07	19.78	.44	.54	1074	564.1	320.1	45.9
51.20	19.07	0.64	0.07	19.78	.44	.54	1073	564.2	319.6	46.3
51.40	19.27	0.64	0.07	19.98	.43	.53	1075	564.3	319.2	46.7
51.60	19.58	0.65	0.07	20.30	.43	.52	1079	564.5	318.7	47.1
51.80	19.80	0.65	0.07	20.52	.42	.51	1082	564.6	318.2	47.4
52.00	19.99	0.65	0.07	20.71	.42	.51	1084	564.7	317.8	47.8
52.20	20.23	0.65	0.07	20.95	.41	.50	1086	564.8	317.3	48.2
52.40	21.34	0.65	0.07	22.06	.39	.48	1096	565.0	316.8	48.6
52.60	22.06	0.65	0.07	22.79	.37	.46	1103	565.1	316.4	49.0
52.80	21.87	0.65	0.07	22.59	.37	.46	1102	565.2	315.9	49.3
53.00	20.68	0.65	0.07	21.40	.40	.49	1091	565.4	315.4	49.7
53.20	20.37	0.65	0.07	21.09	.41	.50	1088	565.5	315.0	50.1
53.40	20.65	0.65	0.07	21.37	.40	.49	1091	565.6	314.5	50.4

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39553.60	20.82	0.65	0.07	21.54	-15.40	-15.49	1092	565.7	314.0	50.8
53.80	20.82	0.65	0.07	21.54	.40	.48	1092	565.9	313.5	51.2
54.00	20.74	0.65	0.07	21.46	.40	.48	1092	566.0	313.0	51.6
54.20	21.14	0.65	0.07	21.86	.39	.47	1096	566.1	312.6	51.9
54.40	22.46	0.65	0.07	23.18	.36	.44	1108	566.3	312.1	52.3
54.60	22.92	0.65	0.07	23.64	.35	.44	1112	566.4	311.6	52.7
54.80	22.58	0.65	0.07	23.30	.36	.44	1109	566.5	311.1	53.1
55.00	21.93	0.65	0.07	22.65	.37	.45	1104	566.7	310.6	53.4
55.20	21.24	0.65	0.07	21.96	.38	.46	1098	566.8	310.1	53.8
55.40	20.78	0.64	0.07	21.50	.39	.47	1094	566.9	309.6	54.2
55.60	20.15	0.64	0.07	20.86	.41	.49	1087	567.1	309.1	54.5
55.80	18.68	0.64	0.07	19.39	.44	.52	1073	567.2	308.6	54.9
56.00	18.17	0.64	0.07	18.88	.45	.53	1069	567.3	308.1	55.3
56.20	17.27	0.64	0.07	17.98	.47	.55	1060	567.5	307.6	55.6
56.40	16.81	0.64	0.07	17.52	.49	.57	1054	567.6	307.1	56.0
56.60	16.49	0.64	0.07	17.20	.49	.57	1052	567.7	306.5	56.4
56.80	16.26	0.63	0.07	16.97	.50	.57	1051	567.9	306.0	56.7
57.00	14.49	0.63	0.07	15.19	.55	.62	1031	568.0	305.5	57.1
57.20	13.73	0.63	0.07	14.43	.57	.65	1022	568.1	305.0	57.5
57.40	13.03	0.63	0.07	13.73	.59	.67	1013	568.3	304.4	57.9
57.60	12.93	0.63	0.07	13.63	.60	.67	1012	568.4	303.9	58.2
57.80	12.56	0.62	0.07	13.25	.61	.69	1007	568.5	303.4	58.6
58.00	12.27	0.62	0.07	12.96	.62	.69	1004	568.7	302.8	59.0
58.20	12.03	0.62	0.07	12.72	.62	.70	1002	568.8	302.3	59.3
58.40	13.68	0.62	0.07	14.37	.57	.64	1022	568.9	301.7	59.7
58.60	16.61	0.61	0.07	17.29	.49	.56	1055	569.1	301.2	60.1
58.80	15.77	0.61	0.07	16.45	.51	.58	1048	569.2	300.6	60.4
59.00	15.07	0.60	0.07	15.75	.52	.59	1041	569.3	300.0	60.8
59.20	16.44	0.60	0.07	17.11	.49	.55	1057	569.4	299.5	61.2
59.40	16.48	0.60	0.07	17.15	.49	.55	1057	569.6	298.9	61.5
59.60	13.18	0.59	0.07	13.84	.58	.65	1019	569.7	298.3	61.9
59.80	12.28	0.59	0.07	12.94	.61	.68	1007	569.8	297.7	62.3
60.00	11.14	0.58	0.07	11.79	.65	.72	992	570.0	297.1	62.6
60.20	10.86	0.58	0.07	11.50	.67	.73	988	570.1	296.5	63.0
60.40	9.91	0.57	0.07	10.55	.70	.77	974	570.2	295.9	63.4
60.60	10.10	0.56	0.07	10.73	.70	.76	977	570.3	295.3	63.7
60.80	9.94	0.55	0.07	10.56	.70	.77	975	570.5	294.7	64.1
61.00	9.49	0.55	0.07	10.11	.72	.79	968	570.6	294.0	64.4
61.20	9.57	0.54	0.06	10.17	.72	.78	969	570.7	293.4	64.8
61.40	9.53	0.53	0.06	10.12	.72	.78	969	570.8	292.8	65.2
61.60	9.76	0.53	0.06	10.35	.71	.77	972	570.9	292.1	65.5
61.80	9.79	0.52	0.06	10.37	.71	.77	973	571.1	291.4	65.9
62.00	9.89	0.51	0.06	10.46	.71	.77	974	571.2	290.8	66.3
62.20	10.13	0.50	0.06	10.69	.70	.75	978	571.3	290.1	66.6
62.40	12.27	0.49	0.06	12.82	.62	.67	1007	571.4	289.4	67.0
62.60	13.16	0.48	0.06	13.70	.58	.64	1019	571.5	288.7	67.3
62.80	12.16	0.47	0.06	12.69	.61	.67	1007	571.6	287.9	67.7
63.00	10.93	0.46	0.06	11.45	.66	.72	990	571.7	287.2	68.0
63.20	9.84	0.44	0.06	10.35	.70	.76	975	571.8	286.5	68.4
63.40	9.53	0.43	0.06	10.03	.72	.77	971	572.0	285.7	68.7
63.60	9.43	0.42	0.06	9.91	.73	.78	968	572.1	284.9	69.1
63.80	9.31	0.41	0.06	9.78	.73	.78	966	572.2	284.1	69.4
64.00	9.22	0.39	0.06	9.67	.73	.79	965	572.3	283.3	69.8
64.20	9.01	0.38	0.06	9.45	.74	.79	962	572.4	282.5	70.1
64.40	8.57	0.36	0.06	8.99	.77	.82	954	572.5	281.7	70.5
64.60	8.39	0.35	0.06	8.80	.78	.83	950	572.6	280.8	70.8
64.80	8.21	0.33	0.06	8.60	.79	.84	947	572.7	280.0	71.2
39565.00	8.26	0.31	0.06	8.64	-15.78	-15.83	948	572.8	279.1	71.5
65.10	8.10	0.30	0.06	8.46	.79	.84	946	572.8	278.6	71.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39565.20	8.07	0.29	0.06	8.42	-15.79	-15.84	945	572.9	278.2	71.8
65.30	7.93	0.28	0.06	8.27	.80	.85	943	572.9	277.7	72.0
65.40	7.67	0.28	0.06	8.00	.82	.86	938	573.0	277.2	72.2
65.50	7.67	0.27	0.06	7.99	.82	.86	938	573.0	276.8	72.3
65.60	7.79	0.26	0.06	8.10	.81	.86	941	573.1	276.3	72.5
65.70	8.17	0.25	0.06	8.47	.79	.83	947	573.1	275.8	72.7
65.80	8.18	0.24	0.06	8.48	.79	.83	948	573.1	275.3	72.8
65.90	8.45	0.23	0.06	8.74	.77	.82	953	573.2	274.8	73.0
66.00	8.73	0.22	0.06	9.00	.76	.80	958	573.2	274.3	73.2
66.10	8.52	0.21	0.05	8.79	.77	.81	955	573.3	273.7	73.3
66.20	8.45	0.20	0.05	8.70	.77	.81	954	573.3	273.2	73.5
66.30	8.74	0.19	0.05	8.98	.76	.80	958	573.4	272.7	73.7
66.40	8.79	0.18	0.05	9.02	.75	.80	959	573.4	272.1	73.8
66.50	8.97	0.17	0.05	9.19	.75	.79	962	573.4	271.6	74.0
66.60	8.79	0.15	0.05	9.00	.76	.80	958	573.5	271.0	74.1
66.70	8.85	0.14	0.05	9.05	.76	.80	959	573.5	270.5	74.3
66.80	9.04	0.13	0.05	9.23	.75	.79	962	573.6	269.9	74.5
66.90	9.47	0.12	0.05	9.65	.73	.77	969	573.6	269.3	74.6
67.00	9.66	0.11	0.05	9.83	.72	.76	972	573.6	268.7	74.8
67.10	10.22	0.10	0.05	10.37	.69	.73	981	573.7	268.1	74.9
67.20	11.02	0.09	0.05	11.16	.66	.70	992	573.7	267.5	75.1
67.30	12.42	0.08	0.05	12.54	.61	.65	1010	573.8	266.8	75.2
67.40	13.09	0.07	0.05	13.21	.58	.62	1020	573.8	266.2	75.4
67.50	15.58	0.05	0.05	15.68	.51	.55	1050	573.8	265.6	75.6
67.60	16.01	0.04	0.05	16.11	.49	.53	1055	573.9	264.9	75.7
67.70	15.60	0.03	0.05	15.68	.51	.54	1050	573.9	264.2	75.9
67.80	15.55	0.02	0.05	15.62	.51	.55	1050	573.9	263.5	76.0
67.90	18.27	0.01	0.05	18.33	.43	.47	1080	574.0	262.8	76.2
68.00	15.43	0.00	0.05	15.48	.51	.54	1050	574.0	262.1	76.3
68.10	13.68	0.00	0.05	13.73	.56	.60	1029	574.0	261.4	76.4
68.20	13.61	0.00	0.05	13.66	.57	.60	1027	574.1	260.6	76.6
68.30	13.30	0.00	0.05	13.35	.57	.61	1024	574.1	259.9	76.7
68.40	14.91	0.00	0.05	14.96	.52	.56	1043	574.1	259.1	76.9
68.50	16.40	0.00	0.05	16.45	.48	.52	1060	574.2	258.3	77.0
68.60	17.77	0.00	0.05	17.81	.45	.49	1073	574.2	257.5	77.2
68.70	19.12	0.00	0.05	19.17	.42	.46	1085	574.2	256.7	77.3
68.80	19.99	0.00	0.05	20.03	.40	.44	1094	574.3	255.9	77.4
68.90	20.97	0.00	0.05	21.01	.37	.41	1105	574.3	255.0	77.6
69.00	16.26	0.00	0.04	16.31	.48	.52	1060	574.3	254.2	77.7
69.10	15.54	0.00	0.04	15.58	.50	.54	1051	574.4	253.3	77.8
69.20	16.73	0.00	0.04	16.78	.47	.51	1064	574.4	252.4	78.0
69.30	15.14	0.00	0.04	15.19	.52	.55	1046	574.4	251.4	78.1
69.40	14.39	0.00	0.04	14.43	.54	.57	1037	574.4	250.5	78.2
69.50	13.75	0.00	0.04	13.79	.56	.60	1029	574.5	249.5	78.3
69.60	13.09	0.00	0.04	13.13	.58	.62	1020	574.5	248.5	78.4
69.70	13.51	0.00	0.04	13.56	.57	.60	1026	574.5	247.5	78.6
69.80	13.80	0.00	0.04	13.84	.56	.59	1030	574.5	246.5	78.7
69.90	14.32	0.00	0.04	14.36	.54	.58	1036	574.6	245.4	78.8
70.00	14.71	0.00	0.04	14.75	.53	.57	1040	574.6	244.3	78.9
70.10	15.20	0.00	0.04	15.24	.52	.55	1046	574.6	243.2	79.0
70.20	15.20	0.00	0.04	15.24	.51	.55	1047	574.6	242.1	79.1
70.30	13.73	0.00	0.04	13.77	.56	.59	1030	574.7	240.9	79.2
70.40	12.98	0.00	0.04	13.02	.58	.62	1020	574.7	239.7	79.3
70.50	11.36	0.00	0.04	11.40	.64	.68	997	574.7	238.5	79.4
70.60	11.54	0.00	0.04	11.58	.64	.67	999	574.7	237.3	79.5
70.70	11.71	0.00	0.04	11.75	.63	.67	1002	574.8	236.0	79.6
70.80	12.58	0.00	0.04	12.62	.60	.63	1014	574.8	234.8	79.7
70.90	12.95	0.00	0.04	12.99	.59	.62	1018	574.8	233.4	79.7
71.00	13.55	0.00	0.04	13.59	.57	.60	1025	574.8	232.1	79.8

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39571.20	13.62	0.00	0.04	13.66	-15.56	-15.60	1028	574.8	229.3	80.0
71.40	12.62	0.00	0.04	12.66	.60	.63	1015	574.9	226.5	80.1
71.60	11.81	0.00	0.04	11.85	.63	.66	1004	574.9	223.5	80.2
71.80	11.50	0.00	0.04	11.54	.64	.67	999	574.9	220.5	80.3
72.00	11.22	0.00	0.03	11.25	.65	.68	995	575.0	217.3	80.3
72.20	10.78	0.00	0.03	10.81	.67	.70	989	575.0	214.1	80.4
72.40	11.36	0.00	0.03	11.39	.65	.68	996	575.0	210.8	80.4
72.60	13.83	0.00	0.03	13.86	.56	.59	1028	575.0	207.4	80.4
72.80	14.81	0.00	0.03	14.85	.53	.56	1041	575.1	204.0	80.3
73.00	14.66	0.00	0.03	14.69	.53	.56	1040	575.1	200.6	80.3
73.20	13.93	0.00	0.03	13.96	.55	.58	1032	575.1	197.1	80.2
73.40	13.61	0.00	0.03	13.64	.56	.59	1027	575.1	193.7	80.1
73.60	13.86	0.00	0.03	13.89	.55	.59	1029	575.1	190.3	80.0
73.80	14.15	0.00	0.03	14.18	.54	.57	1034	575.1	187.0	79.8
74.00	14.52	0.00	0.03	14.55	.53	.56	1038	575.1	183.7	79.6
74.20	14.68	0.00	0.03	14.70	.53	.56	1039	575.1	180.5	79.4
74.40	14.56	0.00	0.03	14.59	.53	.56	1038	575.1	177.3	79.2
74.60	14.06	0.00	0.03	14.09	.54	.58	1033	575.1	174.3	79.0
74.80	14.17	0.00	0.03	14.19	.54	.57	1034	575.1	171.3	78.7
75.00	14.27	0.00	0.02	14.29	.54	.57	1035	575.1	168.5	78.4
75.20	13.62	0.00	0.02	13.64	.56	.59	1028	575.1	165.8	78.1
75.40	13.49	0.00	0.02	13.51	.56	.59	1026	575.1	163.1	77.8
75.60	16.39	0.00	0.02	16.41	.48	.51	1059	575.1	160.6	77.5
75.80	17.33	0.00	0.02	17.35	.45	.48	1069	575.1	158.2	77.1
76.00	17.88	0.00	0.02	17.90	.44	.47	1075	575.1	155.9	76.8
76.20	19.62	0.00	0.02	19.64	.40	.43	1092	575.1	153.7	76.4
76.40	23.66	0.00	0.02	23.67	.31	.34	1128	575.1	151.5	76.0
76.60	25.21	0.00	0.02	25.22	.29	.32	1141	575.0	149.5	75.6
76.80	25.06	0.00	0.02	25.07	.29	.32	1139	575.0	147.6	75.2
77.00	24.37	0.00	0.02	24.39	.30	.33	1133	575.0	145.7	74.8
77.20	24.08	0.00	0.02	24.09	.31	.34	1130	575.0	143.9	74.4
77.40	23.19	0.00	0.02	23.20	.32	.35	1122	574.9	142.2	74.0
77.60	22.47	0.00	0.01	22.48	.34	.37	1117	574.9	140.6	73.5
77.80	21.73	0.00	0.01	21.74	.35	.38	1110	574.9	139.0	73.1
78.00	21.05	-0.01	0.01	21.06	.37	.40	1103	574.9	137.5	72.7
78.20	21.14	-0.01	0.01	21.15	.37	.40	1103	574.8	136.0	72.2
78.40	21.10	-0.01	0.01	21.11	.37	.40	1103	574.8	134.6	71.8
78.60	22.50	-0.01	0.01	22.51	.34	.37	1116	574.8	133.3	71.3
78.80	24.79	-0.01	0.01	24.79	.29	.33	1135	574.7	132.0	70.8
79.00	26.52	-0.01	0.01	26.53	.26	.30	1148	574.7	130.7	70.4
79.20	26.40	-0.01	0.01	26.40	.27	.30	1147	574.6	129.5	69.9
79.40	26.09	-0.01	0.01	26.09	.27	.30	1145	574.6	128.3	69.4
79.60	25.12	-0.01	0.01	25.12	.29	.32	1137	574.6	127.2	69.0
79.80	24.83	-0.01	0.01	24.83	.29	.33	1134	574.5	126.1	68.5
80.00	25.27	-0.01	0.01	25.27	.29	.32	1137	574.5	125.0	68.0
80.20	26.52	-0.01	0.01	26.51	.27	.30	1147	574.4	123.9	67.5
80.40	25.16	-0.01	0.01	25.16	.29	.32	1135	574.4	122.9	67.0
80.60	23.15	-0.01	0.00	23.15	.33	.36	1117	574.3	121.9	66.5
80.80	22.51	-0.01	0.00	22.51	.34	.38	1112	574.3	121.0	66.0
81.00	23.23	-0.01	0.00	23.23	.33	.36	1117	574.2	120.0	65.5
81.20	24.00	-0.01	0.00	24.00	.31	.35	1124	574.1	119.1	65.0
81.40	25.49	-0.01	0.00	25.49	.29	.32	1135	574.1	118.2	64.5
81.60	30.93	-0.01	0.00	30.93	.20	.24	1176	574.0	117.4	64.0
81.80	30.74	-0.01	0.00	30.74	.20	.24	1175	574.0	116.5	63.5
82.00	30.50	-0.01	0.00	30.49	.21	.24	1173	573.9	115.7	63.0
82.20	29.32	-0.01	0.00	29.31	.23	.26	1163	573.9	114.9	62.5
82.40	27.65	-0.01	0.00	27.64	.25	.29	1149	573.8	114.1	62.0
82.60	26.84	-0.01	0.00	26.83	.27	.30	1144	573.7	113.3	61.5
82.80	28.94	-0.01	0.00	28.93	.23	.27	1159	573.7	112.5	61.0
83.00	25.57	-0.01	0.00	25.56	.29	.33	1133	573.6	111.8	60.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39583.20	23.88	-0.01	0.00	23.87	-15.32	-15.36	1119	573.5	111.0	60.0
83.40	22.99	-0.01	0.00	22.98	.34	.38	1110	573.5	110.3	59.5
83.60	21.77	-0.01	0.00	21.76	.36	.41	1098	573.4	109.6	59.0
83.80	21.38	-0.01	0.00	21.37	.37	.42	1094	573.3	108.9	58.4
84.00	21.74	-0.01	0.00	21.73	.37	.41	1096	573.3	108.2	57.9
84.20	21.91	-0.01	0.00	21.90	.36	.41	1098	573.2	107.5	57.4
84.40	25.91	-0.01	0.00	25.89	.29	.33	1131	573.1	106.8	56.9
84.60	25.09	-0.01	0.00	25.08	.30	.34	1125	573.0	106.1	56.4
84.80	26.85	-0.01	-0.01	26.84	.27	.32	1138	573.0	105.5	55.8
85.00	22.42	-0.01	-0.01	22.41	.35	.40	1103	572.9	104.8	55.3
85.20	22.39	-0.01	-0.01	22.37	.35	.40	1101	572.8	104.2	54.8
85.40	23.20	-0.01	-0.01	23.19	.34	.38	1108	572.7	103.6	54.3
85.60	23.04	-0.01	-0.01	23.03	.34	.39	1106	572.7	102.9	53.8
85.80	22.57	-0.01	-0.01	22.55	.35	.40	1102	572.6	102.3	53.2
86.00	22.16	-0.01	-0.01	22.15	.36	.41	1098	572.5	101.7	52.7
86.20	22.48	-0.01	-0.01	22.46	.35	.40	1100	572.4	101.1	52.2
86.40	22.76	-0.01	-0.01	22.75	.35	.40	1103	572.4	100.5	51.7
86.60	23.06	-0.01	-0.01	23.04	.34	.39	1105	572.3	99.9	51.1
86.80	23.37	-0.01	-0.01	23.35	.34	.39	1107	572.2	99.3	50.6
87.00	22.82	-0.01	-0.01	22.81	.35	.40	1101	572.1	98.7	50.1
87.20	22.13	-0.01	-0.01	22.11	.36	.42	1095	572.0	98.2	49.5
87.40	21.59	-0.01	-0.01	21.57	.37	.43	1091	571.9	97.6	49.0
87.60	21.81	-0.01	-0.01	21.80	.37	.42	1092	571.9	97.0	48.5
87.80	21.90	-0.01	-0.01	21.88	.37	.42	1091	571.8	96.5	48.0
88.00	22.19	-0.01	-0.01	22.17	.36	.42	1094	571.7	95.9	47.4
88.20	22.44	-0.01	-0.01	22.42	.36	.41	1096	571.6	95.4	46.9
88.40	22.72	-0.01	-0.01	22.70	.35	.41	1098	571.5	94.8	46.4
88.60	22.92	-0.01	-0.01	22.90	.35	.41	1099	571.5	94.3	45.8
88.80	22.94	-0.01	-0.01	22.92	.35	.41	1099	571.4	93.8	45.3
89.00	22.97	-0.01	-0.01	22.95	.35	.40	1100	571.3	93.2	44.8
89.20	22.97	-0.01	-0.01	22.95	.35	.40	1100	571.2	92.7	44.3
89.40	23.04	-0.01	-0.01	23.02	.35	.40	1100	571.1	92.2	43.8
89.60	23.18	-0.01	-0.01	23.16	.35	.40	1101	571.0	91.7	43.2
89.80	23.44	-0.01	-0.01	23.42	.34	.40	1103	571.0	91.1	42.7
90.00	23.71	-0.01	-0.01	23.68	.34	.39	1105	570.9	90.6	42.2
90.20	24.20	-0.01	-0.01	24.18	.33	.38	1109	570.8	90.1	41.6
90.40	24.45	-0.01	-0.01	24.43	.32	.38	1111	570.7	89.6	41.1
90.60	24.95	-0.01	-0.01	24.93	.31	.37	1114	570.6	89.1	40.6
90.80	24.94	-0.01	-0.01	24.92	.31	.37	1114	570.5	88.6	40.1
91.00	24.91	-0.01	-0.01	24.89	.31	.37	1114	570.5	88.1	39.5
91.20	24.96	-0.01	-0.01	24.94	.31	.37	1114	570.4	87.6	39.0
91.40	24.94	-0.01	-0.01	24.92	.32	.38	1112	570.3	87.1	38.5
91.60	24.95	-0.01	-0.01	24.93	.32	.38	1113	570.2	86.6	37.9
91.80	24.92	-0.01	-0.02	24.89	.32	.38	1112	570.1	86.1	37.4
92.00	24.94	-0.01	-0.02	24.92	.32	.38	1113	570.0	85.6	36.9
92.20	24.95	-0.01	-0.02	24.92	.31	.38	1113	570.0	85.2	36.3
92.40	24.98	-0.01	-0.02	24.96	.31	.37	1114	569.9	84.7	35.8
92.60	25.00	-0.01	-0.02	24.98	.31	.38	1113	569.8	84.2	35.3
92.80	23.82	-0.01	-0.02	23.79	.34	.40	1102	569.7	83.7	34.7
93.00	23.74	-0.01	-0.02	23.71	.34	.41	1101	569.6	83.2	34.2
93.20	23.68	-0.01	-0.02	23.65	.34	.41	1101	569.6	82.8	33.7
93.40	23.64	-0.01	-0.02	23.61	.34	.41	1101	569.5	82.3	33.2
93.60	23.50	-0.01	-0.01	23.48	.34	.41	1099	569.4	81.8	32.6
93.80	23.38	-0.01	-0.01	23.36	.35	.41	1098	569.3	81.3	32.1
94.00	23.59	-0.01	-0.01	23.57	.34	.41	1100	569.3	80.9	31.6
94.20	23.63	-0.01	-0.01	23.61	.34	.41	1101	569.2	80.4	31.0
94.40	23.77	-0.01	-0.01	23.74	.34	.41	1102	569.1	79.9	30.5
94.60	23.95	-0.01	-0.01	23.93	.33	.40	1103	569.0	79.5	30.0
94.80	24.11	-0.01	-0.01	24.09	.33	.40	1104	569.0	79.0	29.4
95.00	23.99	-0.01	-0.01	23.97	.33	.40	1103	568.9	78.6	28.9

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log \rho_0$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39595.20	23.85	-0.01	-0.01	23.83	-15.34	-15.41	1102	568.8	78.1	28.4
95.40	23.61	-0.01	-0.01	23.58	.34	.41	1100	568.7	77.6	27.8
95.60	23.13	-0.01	-0.01	23.10	.35	.42	1096	568.7	77.2	27.3
95.80	23.54	-0.01	-0.01	23.52	.34	.41	1100	568.6	76.7	26.8
96.00	24.56	-0.01	-0.01	24.54	.32	.39	1108	568.5	76.3	26.3
96.20	25.24	-0.01	-0.01	25.22	.31	.38	1114	568.5	75.8	25.7
96.40	25.98	-0.01	-0.01	25.96	.30	.37	1120	568.4	75.4	25.2
96.60	26.83	-0.01	-0.01	26.81	.28	.35	1126	568.3	74.9	24.7
96.80	27.37	-0.01	-0.01	27.36	.27	.34	1130	568.3	74.5	24.1
97.00	27.86	-0.01	-0.01	27.84	.26	.33	1134	568.2	74.0	23.6
97.20	28.53	-0.01	-0.01	28.51	.25	.32	1139	568.1	73.6	23.1
97.40	28.78	-0.01	-0.01	28.76	.25	.32	1141	568.1	73.1	22.5
97.60	27.65	-0.01	-0.01	27.63	.27	.34	1132	568.0	72.7	22.0
97.80	27.44	-0.01	-0.01	27.43	.27	.35	1130	568.0	72.2	21.5
98.00	27.72	-0.01	-0.01	27.70	.27	.34	1132	567.9	71.8	20.9
98.20	28.21	-0.01	-0.01	28.20	.26	.33	1136	567.8	71.3	20.4
98.40	28.77	-0.01	-0.01	28.75	.25	.33	1140	567.8	70.9	19.9
98.60	28.96	-0.01	-0.01	28.95	.25	.32	1141	567.7	70.4	19.3
98.80	28.78	-0.01	-0.01	28.76	.25	.33	1140	567.7	70.0	18.8
99.00	28.76	-0.01	-0.01	28.75	.25	.33	1140	567.6	69.6	18.3
99.20	30.35	-0.01	-0.01	30.33	.23	.30	1152	567.6	69.1	17.8
99.40	32.28	-0.01	-0.01	32.27	.20	.27	1166	567.5	68.7	17.2
99.60	34.61	-0.01	-0.01	34.60	.17	.24	1181	567.5	68.3	16.7
99.80	32.11	-0.01	-0.01	32.10	.20	.27	1164	567.5	67.8	16.2
39600.00	30.91	-0.01	-0.01	30.90	.22	.29	1156	567.4	67.4	15.6
00.20	31.17	-0.01	-0.01	31.16	.22	.29	1158	567.4	66.9	15.1
00.40	31.41	-0.01	-0.01	31.40	.21	.29	1159	567.3	66.5	14.6
00.60	31.48	-0.01	0.00	31.47	.21	.29	1160	567.3	66.1	14.0
00.80	31.02	-0.01	0.00	31.01	.22	.30	1156	567.3	65.6	13.5
01.00	29.39	-0.01	0.00	29.38	.24	.32	1145	567.2	65.2	13.0
01.20	30.76	-0.01	0.00	30.75	.22	.30	1155	567.2	64.8	12.4
01.40	33.67	-0.01	0.00	33.66	.18	.26	1175	567.2	64.3	11.9
01.60	33.46	-0.01	0.00	33.46	.18	.26	1174	567.1	63.9	11.4
01.80	31.75	-0.01	0.00	31.75	.21	.28	1163	567.1	63.5	10.9
02.00	31.44	-0.01	0.00	31.44	.21	.29	1161	567.1	63.0	10.3
02.20	33.56	-0.01	0.00	33.56	.18	.26	1175	567.1	62.6	9.8
02.40	35.78	-0.01	0.00	35.78	.15	.23	1190	567.1	62.2	9.3
02.60	37.65	-0.01	0.00	37.65	.13	.20	1202	567.0	61.7	8.7
02.80	35.33	-0.01	0.00	35.32	.16	.23	1188	567.0	61.3	8.2
03.00	34.58	-0.01	0.00	34.58	.17	.24	1183	567.0	60.9	7.7
03.20	34.43	-0.01	0.00	34.43	.17	.25	1182	567.0	60.5	7.1
03.40	34.59	-0.01	0.00	34.59	.17	.25	1183	567.0	60.0	6.6
03.60	35.91	-0.01	0.00	35.91	.15	.23	1191	567.0	59.6	6.1
03.80	38.68	-0.01	0.01	38.68	.12	.20	1209	567.0	59.2	5.5
04.00	37.57	-0.01	0.01	37.57	.13	.20	1203	567.0	58.7	5.0
04.20	37.05	-0.01	0.01	37.06	.14	.21	1200	567.0	58.3	4.5
04.40	38.68	-0.01	0.01	38.68	.12	.19	1210	567.0	57.9	4.0
04.60	36.94	-0.01	0.01	36.95	.14	.21	1199	567.0	57.5	3.4
04.80	34.87	-0.01	0.01	34.87	.17	.24	1186	567.0	57.0	2.9
05.00	35.05	-0.01	0.01	35.05	.16	.24	1188	567.0	56.6	2.4
05.20	35.68	-0.01	0.01	35.68	.16	.23	1192	567.0	56.2	1.8
05.40	36.71	-0.01	0.01	36.71	.15	.22	1199	567.1	55.7	1.3
05.60	35.06	-0.01	0.01	35.07	.17	.24	1188	567.1	55.3	0.8
05.80	33.32	-0.01	0.01	33.32	.19	.27	1177	567.1	54.9	0.2
06.00	33.08	-0.01	0.01	33.09	.19	.27	1175	567.1	54.5	-0.3
06.20	32.66	-0.01	0.01	32.66	.20	.28	1173	567.2	54.0	-0.8
06.40	32.78	-0.01	0.01	32.78	.20	.27	1174	567.2	53.6	-1.3
06.60	32.64	-0.01	0.02	32.65	.20	.27	1173	567.2	53.2	-1.9
06.80	32.44	-0.01	0.02	32.45	.20	.28	1172	567.3	52.8	-2.4
07.00	31.65	-0.01	0.02	31.66	.21	.29	1167	567.3	52.3	-2.9

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39607.20	31.36	-0.01	0.02	31.37	-15.22	-15.29	1165	567.3	51.9	-3.5
39607.25	31.34	-0.01	0.02	31.35	-15.22	-15.29	1165	567.3	51.8	-3.6
07.50	31.46	-0.01	0.02	31.47	.22	.29	1167	567.4	51.3	-4.3
07.75	31.63	-0.01	0.02	31.65	.21	.29	1168	567.5	50.7	-4.9
08.00	31.69	-0.01	0.02	31.70	.21	.29	1169	567.5	50.2	-5.6
08.25	32.03	0.00	0.02	32.05	.21	.28	1172	567.6	49.7	-6.2
08.50	32.17	0.00	0.02	32.20	.21	.28	1173	567.7	49.2	-6.9
08.75	32.34	0.01	0.03	32.38	.21	.28	1175	567.8	48.6	-7.6
09.00	32.57	0.02	0.03	32.62	.20	.27	1177	567.8	48.1	-8.2
09.25	33.10	0.03	0.03	33.16	.19	.27	1181	567.9	47.6	-8.9
09.50	33.67	0.04	0.03	33.73	.19	.26	1186	568.0	47.0	-9.6
09.75	34.11	0.04	0.03	34.18	.18	.25	1189	568.1	46.5	-10.2
10.00	34.59	0.05	0.03	34.67	.17	.24	1193	568.2	46.0	-10.9
10.25	35.53	0.06	0.03	35.62	.16	.23	1200	568.3	45.4	-11.5
10.50	36.78	0.07	0.03	36.89	.15	.22	1208	568.5	44.9	-12.2
10.75	33.98	0.08	0.03	34.09	.18	.25	1190	568.6	44.4	-12.9
11.00	30.32	0.09	0.04	30.45	.24	.30	1166	568.7	43.8	-13.5
39611.20	31.20	0.09	0.04	31.33	-15.22	-15.29	1172	568.8	43.4	-14.1
11.30	32.31	0.10	0.04	32.45	.21	.27	1180	568.9	43.2	-14.3
11.40	32.25	0.10	0.04	32.38	.21	.27	1180	568.9	43.0	-14.6
11.50	33.46	0.10	0.04	33.60	.19	.26	1188	569.0	42.8	-14.8
11.60	33.14	0.10	0.04	33.29	.20	.26	1186	569.0	42.6	-15.1
11.70	32.23	0.11	0.04	32.38	.21	.27	1180	569.1	42.4	-15.4
11.80	29.91	0.11	0.04	30.06	.24	.31	1164	569.1	42.1	-15.6
11.90	26.64	0.11	0.04	26.79	.29	.36	1140	569.2	41.9	-15.9
12.00	29.93	0.12	0.04	30.09	.24	.30	1165	569.3	41.7	-16.2
12.10	36.73	0.12	0.04	36.89	.15	.21	1211	569.3	41.5	-16.4
12.20	34.84	0.12	0.04	35.01	.18	.23	1199	569.4	41.3	-16.7
12.30	32.59	0.13	0.04	32.76	.21	.26	1184	569.4	41.1	-16.9
12.40	29.75	0.13	0.04	29.92	.25	.31	1164	569.5	40.9	-17.2
12.50	31.70	0.13	0.04	31.88	.22	.28	1178	569.6	40.7	-17.5
12.60	37.28	0.14	0.04	37.46	.15	.21	1215	569.6	40.4	-17.7
12.70	36.86	0.14	0.04	37.05	.15	.21	1213	569.7	40.2	-18.0
12.80	34.56	0.14	0.04	34.75	.18	.24	1198	569.8	40.0	-18.3
12.90	34.95	0.15	0.05	35.14	.18	.23	1200	569.8	39.8	-18.5
13.00	37.43	0.15	0.05	37.63	.15	.20	1217	569.9	39.6	-18.8
13.10	41.43	0.15	0.05	41.63	.10	.16	1241	570.0	39.4	-19.1
13.20	43.41	0.16	0.05	43.62	.08	.14	1253	570.0	39.2	-19.3
13.30	43.51	0.16	0.05	43.72	.08	.14	1253	570.1	38.9	-19.6
13.40	45.59	0.16	0.05	45.80	.06	.11	1265	570.2	38.7	-19.8
13.50	46.60	0.17	0.05	46.82	.05	.11	1271	570.2	38.5	-20.1
13.60	47.05	0.17	0.05	47.27	.05	.10	1273	570.3	38.3	-20.3
13.70	35.35	0.17	0.05	35.58	.17	.22	1204	570.4	38.1	-20.6
13.80	32.56	0.18	0.05	32.78	.21	.26	1186	570.4	37.9	-20.9
13.90	30.58	0.18	0.05	30.82	.24	.29	1173	570.5	37.7	-21.1
14.00	29.67	0.18	0.05	29.90	.25	.30	1166	570.6	37.5	-21.4
39614.20	28.83	0.19	0.05	29.07	-15.27	-15.32	1160	570.7	37.0	-21.9
14.40	26.96	0.20	0.05	27.22	.30	.35	1146	570.9	36.6	-22.5
14.60	24.55	0.21	0.05	24.81	.34	.39	1127	571.1	36.2	-23.0
14.80	22.28	0.21	0.06	22.55	.38	.43	1109	571.2	35.7	-23.5
15.00	22.25	0.22	0.06	22.52	.38	.43	1109	571.4	35.3	-24.1
15.20	22.63	0.23	0.06	22.92	.37	.42	1113	571.5	34.9	-24.6
15.40	22.11	0.23	0.06	22.40	.39	.43	1109	571.7	34.4	-25.1
15.60	21.24	0.24	0.06	21.54	.40	.45	1102	571.9	34.0	-25.7
15.80	20.21	0.25	0.06	20.52	.43	.47	1093	572.1	33.6	-26.2
16.00	19.85	0.26	0.06	20.17	.43	.48	1090	572.2	33.1	-26.7
16.20	20.24	0.26	0.06	20.57	.42	.47	1094	572.4	32.7	-27.3

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39616.40	20.72	0.27	0.06	21.06	-15.41	-15.46	1099	572.6	32.3	-27.8
16.60	20.31	0.28	0.06	20.66	.43	.47	1096	572.8	31.9	-28.3
16.80	18.97	0.29	0.07	19.33	.46	.50	1083	573.0	31.4	-28.9
17.00	18.88	0.29	0.07	19.23	.46	.50	1083	573.2	31.0	-29.4
17.20	22.30	0.30	0.07	22.67	.38	.42	1116	573.4	30.5	-29.9
17.40	24.41	0.31	0.07	24.79	.34	.38	1136	573.6	30.1	-30.5
17.60	20.79	0.31	0.07	21.17	.41	.45	1105	573.8	29.7	-31.0
17.80	19.14	0.32	0.07	19.53	.45	.49	1089	574.0	29.2	-31.5
18.00	18.23	0.33	0.07	18.63	.48	.51	1080	574.2	28.8	-32.1
18.20	17.60	0.34	0.07	18.01	.49	.53	1074	574.4	28.4	-32.6
18.40	17.02	0.34	0.07	17.44	.51	.54	1069	574.6	27.9	-33.1
18.60	16.51	0.35	0.07	16.94	.52	.55	1064	574.8	27.5	-33.7
18.80	16.11	0.36	0.07	16.54	.53	.56	1061	575.1	27.1	-34.2
19.00	15.79	0.36	0.08	16.23	.54	.56	1058	575.3	26.6	-34.7
19.20	15.69	0.37	0.08	16.14	.54	.57	1058	575.5	26.2	-35.3
19.40	15.08	0.38	0.08	15.54	.56	.58	1051	575.7	25.7	-35.8
19.60	14.67	0.39	0.08	15.13	.57	.59	1047	575.9	25.3	-36.3
19.80	13.99	0.39	0.08	14.46	.59	.61	1040	576.2	24.9	-36.9
20.00	13.48	0.40	0.08	13.96	.61	.63	1034	576.4	24.4	-37.4
20.20	12.99	0.41	0.08	13.47	.62	.64	1028	576.6	24.0	-37.9
20.40	12.66	0.41	0.08	13.15	.63	.65	1025	576.9	23.5	-38.4
20.60	12.46	0.42	0.08	12.96	.64	.66	1023	577.1	23.1	-39.0
20.80	12.39	0.43	0.08	12.90	.64	.66	1024	577.4	22.6	-39.5
21.00	12.09	0.43	0.08	12.60	.65	.67	1020	577.6	22.2	-40.0
21.20	11.94	0.44	0.09	12.46	.66	.67	1019	577.9	21.8	-40.6
21.40	11.79	0.45	0.09	12.33	.66	.67	1018	578.1	21.3	-41.1
21.60	11.67	0.45	0.09	12.21	.67	.68	1016	578.4	20.9	-41.6
21.80	11.34	0.46	0.09	11.89	.69	.69	1012	578.6	20.4	-42.1
22.00	11.15	0.46	0.09	11.70	.69	.70	1010	578.9	20.0	-42.7
22.20	10.79	0.47	0.09	11.35	.70	.71	1007	579.1	19.5	-43.2
22.40	11.88	0.48	0.09	12.45	.66	.67	1023	579.4	19.1	-43.7
22.60	12.13	0.48	0.09	12.71	.66	.66	1026	579.7	18.6	-44.3
22.80	11.69	0.49	0.09	12.28	.68	.68	1020	579.9	18.2	-44.8
23.00	11.67	0.49	0.09	12.25	.68	.67	1021	580.2	17.7	-45.3
23.20	11.91	0.50	0.09	12.51	.66	.66	1026	580.5	17.3	-45.8
23.40	12.02	0.50	0.09	12.62	.66	.65	1029	580.7	16.8	-46.4
23.60	11.42	0.51	0.10	12.02	.68	.68	1020	581.0	16.4	-46.9
23.80	11.27	0.52	0.10	11.89	.69	.68	1018	581.3	15.9	-47.4
24.00	11.37	0.52	0.10	11.99	.69	.68	1020	581.5	15.4	-47.9
24.20	11.37	0.53	0.10	11.99	.69	.68	1020	581.8	15.0	-48.4
24.40	11.23	0.53	0.10	11.86	.70	.68	1019	582.1	14.5	-49.0
24.60	11.07	0.53	0.10	11.70	.71	.69	1016	582.4	14.1	-49.5
24.80	11.07	0.54	0.10	11.71	.71	.69	1017	582.7	13.6	-50.0
25.00	11.25	0.54	0.10	11.90	.70	.68	1021	582.9	13.1	-50.5
25.20	11.84	0.55	0.10	12.49	.67	.66	1030	583.2	12.7	-51.1
25.40	11.63	0.55	0.10	12.28	.69	.67	1026	583.5	12.2	-51.6
25.60	10.30	0.56	0.10	10.96	.74	.72	1006	583.8	11.7	-52.1
25.80	9.45	0.56	0.10	10.12	.78	.75	994	584.1	11.3	-52.6
26.00	10.15	0.57	0.10	10.83	.75	.72	1006	584.4	10.8	-53.2
26.20	10.73	0.57	0.10	11.41	.73	.70	1016	584.7	10.3	-53.7
26.40	10.52	0.58	0.10	11.20	.74	.71	1013	585.0	9.9	-54.2
26.60	10.17	0.58	0.11	10.86	.75	.72	1008	585.3	9.4	-54.8
26.80	9.82	0.59	0.11	10.51	.77	.73	1002	585.5	8.9	-55.3
27.00	9.80	0.59	0.11	10.50	.77	.73	1003	585.8	8.4	-55.8
27.20	11.32	0.60	0.11	12.02	.71	.67	1027	586.1	8.0	-56.4
27.40	13.23	0.60	0.11	13.94	.64	.60	1054	586.4	7.5	-56.9
27.60	11.25	0.60	0.11	11.96	.71	.67	1028	586.7	7.0	-57.4
27.80	11.06	0.61	0.11	11.77	.72	.68	1025	587.0	6.5	-57.9
28.00	11.03	0.61	0.11	11.75	.72	.67	1026	587.3	6.0	-58.5
28.20	11.09	0.62	0.11	11.81	.72	.67	1027	587.6	5.5	-59.0

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39628.40	11.20	0.62	0.11	11.93	-15.71	-15.67	1030	587.9	5.0	-59.5
28.60	11.31	0.63	0.11	12.04	.71	.66	1031	588.2	4.6	-60.0
28.80	11.45	0.63	0.11	12.19	.71	.66	1033	588.5	4.1	-60.6
29.00	11.64	0.63	0.11	12.39	.71	.65	1036	588.8	3.6	-61.1
29.20	11.83	0.63	0.11	12.58	.70	.64	1040	589.1	3.1	-61.6
29.40	12.20	0.64	0.11	12.95	.68	.62	1047	589.4	2.6	-62.1
29.60	11.95	0.64	0.11	12.71	.69	.63	1045	589.8	2.1	-62.6
29.80	11.52	0.65	0.11	12.29	.71	.65	1039	590.1	1.6	-63.1
30.00	11.30	0.65	0.11	12.07	.72	.65	1036	590.4	1.1	-63.7
30.20	11.23	0.65	0.11	11.99	.72	.65	1036	590.7	0.6	-64.2
30.40	11.16	0.66	0.11	11.93	.72	.65	1036	591.0	0.1	-64.7
30.60	11.09	0.66	0.12	11.87	.73	.66	1036	591.3	359.6	-65.2
30.80	10.99	0.67	0.12	11.77	.73	.66	1035	591.6	359.0	-65.7
31.00	10.99	0.67	0.12	11.78	.73	.66	1036	591.9	358.5	-66.2
39631.50	11.11	0.68	0.12	11.91	-15.72	-15.64	1041	592.7	357.2	-67.5
32.00	11.88	0.68	0.12	12.67	.69	.61	1055	593.4	355.9	-68.8
32.50	11.35	0.69	0.12	12.15	.71	.62	1050	594.2	354.6	-70.1
33.00	10.77	0.69	0.12	11.58	.74	.64	1043	595.0	353.2	-71.4
33.50	11.17	0.70	0.12	11.99	.72	.62	1052	595.7	351.8	-72.7
34.00	12.60	0.70	0.12	13.42	.67	.57	1076	596.5	350.4	-74.0
39634.20	14.58	0.71	0.12	15.40	-15.60	-15.50	1104	596.8	349.8	-74.5
34.40	12.90	0.71	0.12	13.73	.66	.55	1082	597.1	349.2	-75.0
34.60	11.26	0.71	0.12	12.09	.71	.61	1059	597.4	348.6	-75.5
34.80	12.45	0.71	0.12	13.28	.67	.57	1079	597.7	348.0	-76.0
35.00	11.60	0.71	0.12	12.43	.70	.59	1068	598.0	347.4	-76.5
35.20	15.18	0.71	0.12	16.01	.59	.48	1115	598.3	346.8	-77.0
35.40	15.07	0.71	0.12	15.90	.60	.49	1112	598.6	346.2	-77.5
39635.60	9.07	0.71	0.12	9.90	-15.80	-15.69	1028	598.9	345.6	-78.1
35.70	19.45	0.71	0.12	20.28	.48	.38	1166	599.0	345.3	-78.3
35.80	26.37	0.71	0.12	27.20	.35	.25	1235	599.2	345.0	-78.6
35.90	55.37	0.71	0.12	58.20	.03	-14.93	1430	599.3	344.7	-78.8
36.00	70.44	0.71	0.12	71.27	-14.93	.83	1505	599.5	344.3	-79.1
36.10	73.34	0.71	0.12	74.17	.91	.81	1521	599.6	344.0	-79.3
36.20	66.38	0.72	0.12	67.21	.95	.86	1491	599.8	343.7	-79.6
36.30	51.31	0.72	0.12	52.14	-15.06	.97	1415	599.9	343.4	-79.8
36.40	32.78	0.72	0.12	33.61	.25	-15.16	1295	600.1	343.1	-80.1
36.50	32.83	0.72	0.12	33.67	.25	.15	1293	600.2	342.7	-80.3
36.60	26.52	0.72	0.12	27.35	.35	.24	1240	600.4	342.4	-80.6
39636.80	17.56	0.72	0.12	18.39	-15.53	-15.42	1151	600.7	341.8	-81.1
37.00	13.44	0.72	0.12	14.27	.64	.53	1100	601.0	341.1	-81.6
37.20	15.75	0.72	0.12	16.59	.58	.46	1129	601.3	340.4	-82.1
37.40	15.36	0.72	0.12	16.20	.59	.47	1124	601.5	339.7	-82.6
37.60	12.11	0.72	0.12	12.95	.69	.57	1081	601.8	339.0	-83.1
37.80	9.77	0.72	0.12	10.61	.78	.65	1046	602.1	338.3	-83.6
38.00	8.49	0.72	0.12	9.33	.84	.71	1025	602.4	337.6	-84.1
38.20	10.87	0.72	0.12	11.71	.74	.61	1066	602.7	336.9	-84.6
38.40	13.44	0.72	0.11	14.27	.65	.52	1102	603.0	336.1	-85.1
38.60	13.86	0.72	0.11	14.69	.64	.51	1110	603.2	335.4	-85.6
38.80	15.04	0.72	0.11	15.87	.60	.47	1128	603.5	334.6	-86.1
39.00	18.42	0.71	0.11	19.25	.52	.39	1168	603.8	333.8	-86.6
39.20	20.52	0.71	0.11	21.35	.47	.34	1190	604.1	333.0	-87.1
39.40	14.97	0.71	0.11	15.80	.60	.47	1129	604.4	332.2	-87.6
39.60	12.06	0.71	0.11	12.88	.70	.56	1090	604.6	331.4	-88.1
39.80	10.47	0.71	0.11	11.29	.76	.61	1064	604.9	330.5	-88.6
40.00	9.77	0.71	0.11	10.59	.79	.64	1051	605.2	329.7	-89.1
40.20	7.64	0.71	0.11	8.46	.89	.74	1012	605.4	328.8	-89.6

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39640.40	8.58	0.71	0.11	9.40	-15.85	-15.70	1030	605.7	327.9	-90.0
40.60	8.95	0.70	0.11	9.77	.83	.68	1037	606.0	326.9	-90.5
40.80	11.94	0.70	0.11	12.76	.71	.56	1089	606.2	326.0	-91.0
41.00	19.88	0.70	0.11	20.69	.49	.34	1190	606.5	325.0	-91.5
41.20	18.99	0.70	0.11	19.80	.51	.36	1182	606.7	324.0	-92.0
41.40	17.74	0.70	0.11	12.55	.71	.56	1092	607.0	323.0	-92.4
41.60	9.00	0.70	0.11	9.81	.83	.66	1044	607.2	321.9	-92.9
41.80	7.00	0.70	0.11	7.81	.92	.75	1008	607.5	321.2	-93.1
42.00	7.25	0.69	0.11	8.05	.90	.74	1015	607.7	320.1	-93.6
42.20	6.22	0.69	0.11	7.02	.97	.80	991	608.0	318.9	-94.1
42.40	5.42	0.69	0.11	6.22	-16.03	.86	969	608.2	317.7	-94.6
42.60	5.12	0.69	0.11	5.91	.05	.88	961	608.5	316.5	-95.0
42.80	5.30	0.68	0.11	6.09	.04	.86	966	608.7	315.2	-95.5
43.00	5.35	0.68	0.11	6.13	.04	.86	968	608.9	313.8	-95.9
43.20	5.22	0.68	0.11	6.00	.05	.87	965	609.2	312.5	-96.4
43.40	5.09	0.68	0.10	5.87	.06	.88	962	609.4	311.0	-96.8
43.60	5.04	0.67	0.10	5.82	.06	.88	962	609.6	309.5	-97.3
43.80	5.29	0.67	0.10	6.06	.04	.86	971	609.8	308.0	-97.7
44.00	5.19	0.67	0.10	5.96	.04	.86	969	610.1	306.4	-98.1
44.20	5.06	0.67	0.10	5.83	.06	.87	965	610.3	304.7	-98.5
44.40	4.30	0.66	0.10	5.06	.12	.93	942	610.5	302.9	-99.0
44.60	3.97	0.66	0.10	4.73	.16	.97	930	610.7	301.0	-99.4
44.80	3.75	0.66	0.10	4.51	.18	.99	922	610.9	299.1	-99.8
45.00	3.80	0.65	0.10	4.55	.17	.98	925	611.1	297.1	-100.1
45.20	3.78	0.65	0.10	4.53	.18	.98	924	611.3	294.9	-100.5
45.40	3.74	0.65	0.10	4.49	.19	.99	922	611.5	292.7	-100.9
45.60	3.93	0.64	0.10	4.67	.17	.97	928	611.7	290.3	-101.2
45.80	4.24	0.64	0.10	4.98	.13	.94	941	611.9	287.9	-101.6
46.00	4.55	0.64	0.10	5.28	.11	.91	952	612.1	285.3	-101.9
46.20	4.71	0.63	0.09	5.44	.09	.90	957	612.3	282.6	-102.2
46.40	3.95	0.63	0.09	4.67	.17	.97	931	612.5	279.8	-102.5
46.60	4.08	0.63	0.09	4.80	.16	.96	935	612.6	276.8	-102.7
46.80	5.66	0.62	0.09	6.37	.03	.83	983	612.8	273.7	-103.0
39647.00	6.96	0.62	0.09	7.67	-15.95	-15.74	1016	613.0	270.3	-103.2
47.10	8.43	0.61	0.09	9.14	.86	.66	1051	613.1	268.7	-103.3
47.20	12.74	0.61	0.09	13.44	.68	.49	1127	613.2	267.0	-103.4
47.30	9.59	0.61	0.09	10.29	.79	.60	1078	613.2	265.3	-103.5
47.40	6.78	0.61	0.09	7.48	.94	.74	1019	613.3	263.6	-103.6
39647.60	6.04	0.60	0.09	6.73	-16.01	-15.80	993	613.5	260.1	-103.7
47.80	4.19	0.60	0.09	4.87	.16	.95	938	613.6	256.6	-103.9
48.00	4.65	0.59	0.09	5.33	.11	.90	955	613.8	252.9	-104.0
48.20	5.65	0.59	0.09	6.32	.03	.82	987	614.0	249.3	-104.0
48.40	5.62	0.58	0.09	6.29	.03	.82	987	614.1	245.6	-104.1
48.60	3.54	0.58	0.08	4.20	.22	-16.01	918	614.2	241.9	-104.1
48.80	2.34	0.57	0.08	3.00	.38	.17	863	614.4	238.2	-104.0
49.00	2.40	0.57	0.08	3.05	.38	.17	864	614.5	234.6	-104.0
49.20	2.69	0.56	0.08	3.33	.34	.13	878	614.7	231.0	-103.9
49.40	2.83	0.56	0.08	3.46	.32	.11	884	614.8	227.5	-103.8
49.60	2.96	0.55	0.08	3.59	.30	.09	893	614.9	224.1	-103.7
49.80	2.87	0.55	0.08	3.50	.30	.09	891	615.0	220.8	-103.5
50.00	2.75	0.54	0.08	3.37	.32	.11	886	615.2	217.6	-103.3
50.20	2.64	0.54	0.08	3.25	.34	.12	880	615.3	214.6	-103.1
50.40	2.52	0.53	0.08	3.13	.36	.14	874	615.4	211.6	-102.9
50.60	2.40	0.53	0.08	3.00	.38	.16	867	615.5	208.8	-102.7
50.80	2.34	0.52	0.07	2.94	.39	.18	862	615.6	206.1	-102.4
51.00	2.35	0.52	0.07	2.94	.40	.18	862	615.7	203.6	-102.1
51.20	2.30	0.51	0.07	2.88	.40	.18	860	615.8	201.1	-101.8
51.40	2.15	0.50	0.07	2.72	.43	.21	852	615.8	198.8	-101.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39651.60	2.02	0.50	0.07	2.59	-16.45	-16.24	842	615.9	196.5	-101.2
51.80	1.93	0.49	0.07	2.49	.48	.27	835	616.0	194.4	-100.9
52.00	1.86	0.49	0.07	2.42	.49	.28	831	616.1	192.3	-100.6
52.20	1.82	0.48	0.07	2.37	.50	.29	828	616.2	190.4	-100.2
52.40	1.81	0.48	0.07	2.35	.51	.30	827	616.2	188.5	-99.8
52.60	1.79	0.47	0.07	2.32	.51	.31	825	616.3	186.8	-99.5
52.80	1.79	0.46	0.06	2.32	.51	.30	825	616.3	185.1	-99.1
53.00	1.82	0.46	0.06	2.35	.50	.29	829	616.4	183.4	-98.7
53.20	1.75	0.45	0.06	2.26	.52	.31	822	616.4	181.9	-98.3
53.40	1.71	0.45	0.06	2.22	.53	.32	819	616.5	180.4	-97.9
53.60	1.70	0.44	0.06	2.20	.54	.33	818	616.5	178.9	-97.5
53.80	1.68	0.44	0.06	2.18	.54	.33	817	616.6	177.5	-97.1
54.00	1.67	0.43	0.06	2.16	.54	.33	816	616.6	176.2	-96.7
54.20	1.68	0.43	0.06	2.16	.54	.33	817	616.6	174.9	-96.3
54.40	1.67	0.42	0.06	2.15	.54	.33	817	616.6	173.6	-95.9
54.60	1.68	0.42	0.06	2.16	.55	.33	817	616.7	172.4	-95.5
54.80	1.73	0.41	0.05	2.19	.54	.33	819	616.7	171.3	-95.0
55.00	1.74	0.40	0.05	2.19	.54	.33	819	616.7	170.1	-94.6
55.20	1.79	0.40	0.05	2.24	.53	.31	824	616.7	169.0	-94.2
55.40	1.96	0.39	0.05	2.40	.49	.27	836	616.7	168.0	-93.7
55.60	2.16	0.39	0.05	2.59	.46	.24	848	616.7	166.9	-93.3
55.80	2.29	0.38	0.05	2.72	.44	.22	856	616.7	165.9	-92.9
56.00	2.31	0.37	0.05	2.73	.44	.21	857	616.7	164.9	-92.4
56.20	2.61	0.37	0.05	3.03	.39	.16	875	616.6	164.0	-92.0
56.40	2.37	0.36	0.05	2.78	.43	.20	861	616.6	163.0	-91.5
56.60	2.22	0.35	0.04	2.62	.46	.24	850	616.6	162.1	-91.1
56.80	1.92	0.35	0.04	2.31	.52	.31	830	616.6	161.2	-90.6
57.00	1.94	0.34	0.04	2.33	.52	.30	831	616.5	160.4	-90.2
57.20	1.98	0.33	0.04	2.35	.51	.29	833	616.5	159.5	-89.7
57.40	2.01	0.32	0.04	2.38	.51	.29	836	616.4	158.7	-89.3
57.60	2.04	0.32	0.04	2.40	.50	.28	838	616.4	157.8	-88.8
57.80	2.04	0.32	0.04	2.40	.50	.28	838	616.3	157.0	-88.3
58.00	2.06	0.30	0.04	2.40	.50	.28	838	616.3	156.3	-87.9
58.20	2.14	0.30	0.04	2.47	.49	.27	842	616.2	155.5	-87.4
58.40	2.21	0.29	0.03	2.54	.48	.26	847	616.1	154.7	-86.9
58.60	2.39	0.28	0.03	2.70	.45	.23	857	616.1	154.0	-86.5
58.80	2.30	0.28	0.03	2.61	.46	.24	853	616.0	153.2	-86.0
59.00	2.24	0.27	0.03	2.54	.47	.25	850	615.9	152.5	-85.5
59.20	2.20	0.26	0.03	2.49	.48	.26	847	615.8	151.8	-85.1
59.40	2.15	0.25	0.03	2.43	.50	.28	842	615.7	151.1	-84.6
59.60	2.17	0.25	0.03	2.44	.50	.29	841	615.7	150.4	-84.1
59.80	2.16	0.24	0.03	2.43	.51	.29	840	615.6	149.7	-83.6
60.00	2.17	0.23	0.02	2.43	.51	.30	840	615.5	149.0	-83.2
60.20	2.19	0.22	0.02	2.44	.51	.29	841	615.4	148.4	-82.7
60.40	2.24	0.22	0.02	2.48	.50	.29	843	615.2	147.7	-82.2
60.60	2.30	0.21	0.02	2.53	.49	.28	846	615.1	147.0	-81.7
60.80	2.36	0.20	0.02	2.58	.48	.26	851	615.0	146.4	-81.3
39661.00	2.47	0.19	0.02	2.68	-16.46	-16.24	858	614.9	145.8	-80.8
61.25	2.47	0.18	0.02	2.67	.47	.25	856	614.7	145.0	-80.2
61.50	2.43	0.17	0.02	2.61	.48	.26	853	614.5	144.2	-79.6
61.75	2.40	0.16	0.01	2.57	.48	.27	851	614.4	143.4	-79.0
62.00	2.39	0.15	0.01	2.55	.49	.28	849	614.2	142.7	-78.4
62.25	2.43	0.14	0.01	2.58	.49	.27	850	614.0	141.9	-77.8
62.50	2.46	0.13	0.01	2.60	.48	.27	853	613.8	141.2	-77.2
62.75	2.48	0.12	0.01	2.61	.48	.26	854	613.6	140.5	-76.6
63.00	2.60	0.11	0.01	2.72	.46	.25	859	613.4	139.7	-76.0
63.25	2.78	0.10	0.01	2.88	.44	.23	868	613.2	139.0	-75.3
63.50	2.91	0.09	0.00	3.00	.42	.21	875	613.0	138.3	-74.7
63.75	2.85	0.08	0.00	2.92	.42	.21	872	612.8	137.6	-74.1

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39664.00	2.71	0.06	0.00	2.77	-16.45	-16.24	863	612.5	136.9	-73.5
64.25	2.66	0.05	0.00	2.72	.46	.26	860	612.3	136.2	-72.9
64.50	2.71	0.04	0.00	2.76	.45	.25	862	612.1	135.5	-72.3
64.75	2.76	0.03	0.00	2.79	.45	.25	864	611.8	134.8	-71.7
65.00	2.83	0.02	0.00	2.85	.44	.23	868	611.6	134.2	-71.1
65.25	2.90	0.01	-0.01	2.91	.43	.23	871	611.3	133.5	-70.5
65.50	3.01	0.01	-0.01	3.00	.41	.21	876	611.0	132.8	-69.8
65.75	3.10	0.00	-0.01	3.09	.40	.20	880	610.8	132.1	-69.2
66.00	3.23	-0.01	-0.01	3.21	.38	.19	885	610.5	131.5	-68.6
66.25	3.37	-0.02	-0.01	3.33	.36	.17	893	610.2	130.8	-68.0
66.50	3.56	-0.03	-0.01	3.51	.33	.14	902	609.9	130.2	-67.4
66.75	4.29	-0.04	-0.01	4.24	.25	.06	931	609.6	129.5	-66.7
67.00	5.46	-0.05	-0.02	5.39	.13	-15.94	971	609.3	128.9	-66.1
39667.20	6.05	-0.06	-0.02	5.97	-16.08	-15.89	990	609.1	128.4	-65.6
67.40	4.91	-0.07	-0.02	4.83	.18	.99	955	608.9	127.9	-65.1
67.60	3.73	-0.07	-0.02	3.64	.31	-16.12	910	608.6	127.4	-64.6
67.80	3.88	-0.08	-0.02	3.78	.29	.11	915	608.4	126.9	-64.1
68.00	4.23	-0.09	-0.02	4.12	.25	.07	929	608.1	126.3	-63.6
68.20	4.55	-0.09	-0.02	4.43	.22	.04	940	607.9	125.8	-63.1
68.40	5.95	-0.10	-0.02	5.82	.10	-15.92	982	607.6	125.3	-62.6
68.60	4.82	-0.11	-0.02	4.69	.19	-16.01	949	607.3	124.8	-62.1
68.80	4.10	-0.12	-0.03	3.96	.28	.10	920	607.1	124.3	-61.6
69.00	4.08	-0.13	-0.03	3.93	.28	.10	919	606.8	123.9	-61.1
69.20	4.28	-0.13	-0.03	4.12	.25	.08	927	606.6	123.4	-60.6
69.40	4.23	-0.14	-0.03	4.07	.26	.09	924	606.3	122.9	-60.1
69.60	4.43	-0.15	-0.03	4.25	.24	.07	930	606.0	122.4	-59.6
69.80	4.50	-0.15	-0.03	4.31	.23	.06	933	605.7	121.9	-59.1
70.00	4.63	-0.16	-0.03	4.43	.22	.05	938	605.5	121.4	-58.6
70.20	4.35	-0.17	-0.03	4.14	.25	.09	927	605.2	120.9	-58.1
70.40	3.98	-0.18	-0.03	3.77	.29	.13	914	604.9	120.4	-57.6
70.60	4.11	-0.18	-0.03	3.89	.27	.11	920	604.6	119.9	-57.1
70.80	3.81	-0.19	-0.03	3.58	.31	.15	908	604.3	119.5	-56.6
39671.00	3.89	-0.20	-0.03	3.66	-16.30	-16.14	912	604.0	119.0	-56.1
71.25	4.46	-0.21	-0.04	4.22	.23	.07	933	603.7	118.4	-55.5
71.50	5.32	-0.21	-0.04	5.07	.15	-15.99	961	603.3	117.8	-54.8
71.75	5.46	-0.22	-0.04	5.20	.13	.98	964	603.0	117.2	-54.2
72.00	5.70	-0.23	-0.04	5.43	.11	.97	971	602.6	116.6	-53.6
72.25	5.52	-0.24	-0.04	5.24	.13	.98	965	602.2	116.0	-52.9
72.50	5.34	-0.24	-0.04	5.05	.14	-16.00	961	601.8	115.4	-52.3
72.75	5.32	-0.25	-0.04	5.03	.14	.00	961	601.5	114.8	-51.7
73.00	4.56	-0.26	-0.04	4.26	.21	.08	935	601.1	114.2	-51.0
73.25	4.80	-0.26	-0.04	4.49	.19	.05	943	600.7	113.7	-50.4
73.50	4.80	-0.27	-0.05	4.48	.20	.06	940	600.3	113.1	-49.8
73.75	4.64	-0.27	-0.05	4.32	.22	.09	931	599.9	112.5	-49.2
74.00	4.34	-0.28	-0.05	4.01	.25	.12	921	599.5	111.9	-48.5
74.25	3.91	-0.29	-0.05	3.57	.30	.17	906	599.2	111.3	-47.9
74.50	3.79	-0.29	-0.05	3.45	.32	.19	900	598.8	110.7	-47.3
74.75	3.85	-0.30	-0.05	3.50	.31	.19	902	598.4	110.2	-46.6
75.00	4.04	-0.30	-0.05	3.69	.28	.16	910	598.0	109.6	-46.0
75.25	4.22	-0.31	-0.05	3.87	.25	.14	918	597.6	109.0	-45.4
75.50	4.34	-0.31	-0.05	3.98	.24	.13	922	597.2	108.4	-44.7
75.75	4.47	-0.31	-0.05	4.10	.23	.11	927	596.8	107.9	-44.1
76.00	4.57	-0.32	-0.05	4.20	.21	.10	931	596.4	107.3	-43.5
76.25	4.79	-0.32	-0.06	4.41	.18	.08	940	596.0	106.7	-42.8
76.50	5.23	-0.32	-0.06	4.85	.13	.03	955	595.6	106.2	-42.2
76.75	5.44	-0.32	-0.06	5.06	.11	.02	961	595.2	105.6	-41.5
77.00	5.23	-0.32	-0.06	4.84	.14	.04	953	594.8	105.0	-40.9
77.25	5.05	-0.33	-0.06	4.67	.16	.06	946	594.5	104.5	-40.3

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_u$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39677.50	4.89	-0.33	-0.06	4.51	-16.18	-16.08	939	594.1	103.9	-39.6
77.75	4.81	-0.33	-0.06	4.43	.18	.09	938	593.7	103.3	-39.0
78.00	4.75	-0.32	-0.06	4.36	.18	.09	938	593.3	102.8	-38.4
78.25	5.22	-0.32	-0.06	4.84	.13	.04	954	592.9	102.2	-37.7
78.50	5.30	-0.32	-0.06	4.92	.12	.04	956	592.5	101.6	-37.1
78.75	4.79	-0.32	-0.06	4.41	.17	.09	938	592.1	101.1	-36.4
79.00	4.69	-0.32	-0.06	4.31	.18	.10	934	591.8	100.5	-35.8
79.25	4.57	-0.32	-0.06	4.19	.19	.12	930	591.4	99.9	-35.2
79.50	4.52	-0.31	-0.07	4.14	.20	.13	928	591.0	99.4	-34.5
79.75	4.47	-0.31	-0.07	4.10	.20	.13	926	590.6	98.8	-33.9
80.00	4.37	-0.30	-0.07	4.01	.21	.14	923	590.3	98.3	-33.3
80.25	4.39	-0.29	-0.07	4.03	.21	.14	923	589.9	97.7	-32.6
80.50	4.39	-0.29	-0.07	4.03	.21	.14	923	589.5	97.1	-32.0
80.75	4.39	-0.28	-0.07	4.04	.21	.14	923	589.2	96.6	-31.3
81.00	4.32	-0.27	-0.07	3.98	.21	.15	922	588.8	96.0	-30.7
81.25	4.30	-0.26	-0.07	3.97	.21	.15	921	588.5	95.5	-30.1
81.50	4.31	-0.24	-0.07	4.00	.20	.15	922	588.1	94.9	-29.4
81.75	4.30	-0.23	-0.07	4.01	.20	.15	923	587.8	94.3	-28.8
82.00	5.03	-0.21	-0.07	4.75	.12	.07	947	587.4	93.8	-28.1
82.25	5.73	-0.19	-0.07	5.47	.05	.01	970	587.1	93.2	-27.5
82.50	5.86	-0.16	-0.07	5.62	.04	-15.99	975	586.8	92.7	-26.9
82.75	6.38	-0.10	-0.07	6.21	-15.99	.95	991	586.5	92.1	-26.2
83.00	6.62	-0.06	-0.07	6.48	.97	.93	998	586.1	91.6	-25.6
83.25	6.20	-0.02	-0.07	6.10	.99	.96	988	585.8	91.0	-24.9
83.50	6.01	0.00	-0.07	5.94	-16.01	.97	983	585.5	90.5	-24.3
83.75	5.99	0.00	-0.07	5.92	.01	.98	982	585.2	89.9	-23.6
84.00	6.09	0.00	-0.07	6.01	.00	.97	984	584.9	89.3	-23.0
39684.20	5.97	0.00	-0.07	5.90	-16.01	-15.98	981	584.6	88.9	-22.5
84.40	5.98	0.00	-0.07	5.91	.01	.98	981	584.4	88.5	-22.0
84.60	6.26	0.00	-0.07	6.18	-15.99	.96	987	584.2	88.0	-21.4
84.80	6.61	0.00	-0.07	6.54	.97	.94	995	583.9	87.6	-20.9
85.00	7.13	0.00	-0.07	7.05	.93	.90	1009	583.7	87.1	-20.4
85.20	7.37	0.00	-0.07	7.30	.91	.88	1016	583.5	86.7	-19.9
85.40	7.57	0.00	-0.08	7.49	.89	.87	1020	583.3	86.2	-19.4
85.60	7.78	0.00	-0.08	7.71	.88	.86	1025	583.1	85.8	-18.9
85.80	8.06	0.00	-0.08	7.98	.86	.85	1031	582.9	85.4	-18.4
86.00	7.94	0.00	-0.08	7.86	.87	.85	1028	582.7	84.9	-17.8
86.20	8.01	0.00	-0.08	7.93	.87	.85	1029	582.5	84.5	-17.3
86.40	8.07	0.00	-0.08	7.99	.86	.85	1030	582.3	84.0	-16.8
86.60	8.10	0.00	-0.08	8.02	.86	.85	1031	582.1	83.6	-16.3
86.80	8.24	0.00	-0.08	8.17	.85	.83	1036	581.9	83.1	-15.8
87.00	8.92	0.00	-0.08	8.85	.81	.80	1051	581.7	82.7	-15.3
87.20	9.86	0.00	-0.08	9.79	.76	.75	1068	581.5	82.3	-14.8
87.40	9.38	0.00	-0.08	9.30	.79	.78	1058	581.3	81.8	-14.2
87.60	8.00	0.00	-0.08	7.93	.86	.85	1031	581.2	81.4	-13.7
87.80	8.13	0.00	-0.08	8.05	.85	.84	1033	581.0	80.9	-13.2
88.00	8.63	0.00	-0.08	8.55	.82	.82	1043	580.8	80.5	-12.7
88.20	9.13	0.00	-0.08	9.05	.80	.79	1053	580.6	80.0	-12.2
88.40	9.32	0.00	-0.08	9.24	.79	.78	1057	580.5	79.6	-11.7
88.60	9.48	0.00	-0.08	9.40	.78	.78	1060	580.3	79.2	-11.1
88.80	9.65	0.00	-0.08	9.58	.77	.77	1063	580.1	78.7	-10.6
89.00	9.92	0.00	-0.08	9.84	.75	.75	1069	580.0	78.3	-10.1
89.20	10.49	0.00	-0.08	10.41	.73	.73	1079	579.8	77.8	-9.6
89.40	11.86	0.00	-0.07	11.78	.67	.67	1102	579.7	77.4	-9.1
89.60	11.93	0.00	-0.07	11.85	.67	.67	1104	579.5	76.9	-8.6
89.80	11.86	0.00	-0.07	11.79	.67	.67	1103	579.4	76.5	-8.1
90.00	12.00	0.00	-0.07	11.92	.66	.67	1105	579.2	76.0	-7.5
90.20	12.01	0.00	-0.07	11.93	.66	.67	1105	579.1	75.6	-7.0
90.40	11.98	0.00	-0.07	11.90	.66	.67	1104	578.9	75.2	-6.5

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39690.60	11.26	0.00	-0.07	11.18	-15.69	-15.70	1092	578.8	74.7	-6.0
90.80	10.98	0.00	-0.07	10.90	.70	.71	1087	578.6	74.3	-5.5
91.00	11.49	0.00	-0.07	11.42	.68	.69	1096	578.5	73.8	-5.0
91.20	11.92	0.00	-0.07	11.85	.66	.67	1104	578.3	73.4	-4.4
91.40	12.41	0.00	-0.07	12.34	.64	.66	1111	578.2	72.9	-3.9
91.60	12.43	0.00	-0.07	12.36	.64	.66	1112	578.0	72.5	-3.4
91.80	12.43	0.00	-0.07	12.36	.64	.66	1112	577.9	72.0	-2.9
92.00	12.62	0.00	-0.07	12.55	.63	.65	1115	577.8	71.6	-2.4
92.20	12.92	0.00	-0.07	12.85	.62	.64	1120	577.6	71.1	-1.9
92.40	13.18	0.00	-0.07	13.11	.61	.63	1124	577.5	70.7	-1.3
92.60	13.44	0.00	-0.07	13.37	.60	.62	1128	577.4	70.2	-0.8
92.80	13.67	0.00	-0.07	13.60	.60	.61	1131	577.3	69.8	-0.3
93.00	13.96	0.00	-0.07	13.89	.59	.60	1136	577.1	69.3	0.2
93.20	14.20	0.00	-0.07	14.13	.58	.60	1139	577.0	68.9	0.7
93.40	14.45	0.00	-0.07	14.38	.57	.59	1143	576.9	68.4	1.2
93.60	14.71	0.00	-0.07	14.64	.56	.58	1146	576.8	68.0	1.8
93.80	14.95	0.00	-0.07	14.89	.55	.57	1150	576.6	67.5	2.3
94.00	15.16	0.00	-0.07	15.10	.54	.57	1153	576.5	67.1	2.8
94.20	15.45	0.00	-0.06	15.38	.54	.56	1156	576.4	66.6	3.3
94.40	15.76	0.00	-0.06	15.69	.53	.55	1160	576.3	66.2	3.8
94.60	16.08	0.00	-0.06	16.02	.52	.54	1165	576.2	65.7	4.4
94.80	16.81	0.00	-0.06	16.75	.50	.52	1175	576.0	65.3	4.9
95.00	19.19	0.00	-0.06	19.13	.44	.46	1205	575.9	64.8	5.4
95.20	20.31	0.00	-0.06	20.25	.41	.43	1218	575.8	64.4	5.9
95.40	18.78	0.00	-0.06	18.72	.44	.47	1200	575.7	63.9	6.4
95.60	17.80	0.00	-0.06	17.74	.47	.49	1188	575.6	63.5	7.0
95.80	17.90	0.00	-0.06	17.85	.46	.49	1190	575.5	63.0	7.5
96.00	18.06	0.00	-0.06	18.01	.46	.49	1192	575.3	62.5	8.0
96.20	18.51	0.00	-0.06	18.45	.45	.47	1198	575.2	62.1	8.5
96.40	18.83	0.00	-0.06	18.77	.44	.47	1202	575.1	61.6	9.0
96.60	19.17	0.00	-0.06	19.12	.43	.46	1207	575.0	61.2	9.5
96.80	19.52	0.00	-0.05	19.47	.42	.45	1211	574.9	60.7	10.1
97.00	20.07	0.00	-0.05	20.01	.41	.44	1218	574.8	60.2	10.6
97.20	20.56	0.00	-0.05	20.50	.39	.42	1224	574.7	59.8	11.1
97.40	20.15	0.00	-0.05	20.10	.40	.43	1219	574.6	59.3	11.6
97.60	19.76	0.00	-0.05	19.71	.41	.44	1215	574.5	58.9	12.1
97.80	19.08	0.00	-0.05	19.03	.42	.45	1207	574.4	58.4	12.6
98.00	18.33	0.00	-0.05	18.28	.44	.47	1199	574.3	57.9	13.2
98.20	18.63	0.00	-0.05	18.58	.43	.46	1203	574.2	57.5	13.7
98.40	18.99	0.00	-0.05	18.94	.42	.46	1207	574.1	57.0	14.2
98.60	19.41	-0.01	-0.05	19.35	.41	.45	1212	574.0	56.5	14.7
98.80	19.68	-0.01	-0.05	19.62	.41	.44	1215	573.9	56.1	15.2
99.00	20.11	-0.02	-0.05	20.05	.39	.43	1221	573.8	55.6	15.8
99.20	20.35	-0.02	-0.04	20.28	.39	.42	1224	573.7	55.1	16.3
99.40	21.94	-0.02	-0.04	21.88	.36	.39	1242	573.6	54.6	16.8
99.60	21.39	-0.02	-0.04	21.33	.37	.40	1236	573.5	54.2	17.3
99.80	21.56	-0.02	-0.04	21.50	.36	.40	1238	573.5	53.7	17.8
39700.00	22.20	-0.02	-0.04	22.14	.35	.38	1245	573.4	53.2	18.4
00.20	21.72	-0.02	-0.04	21.66	.36	.39	1240	573.3	52.7	18.9
00.40	23.36	-0.01	-0.04	23.31	.33	.36	1257	573.2	52.2	19.4
00.60	22.35	-0.01	-0.04	22.30	.34	.38	1247	573.2	51.8	19.9
00.80	22.20	0.00	-0.04	22.15	.35	.38	1245	573.1	51.3	20.5
01.00	22.12	0.00	-0.04	22.08	.35	.39	1244	573.0	50.8	21.0
01.20	24.43	0.01	-0.03	24.41	.30	.34	1269	573.0	50.3	21.5
01.40	27.45	0.01	-0.03	27.42	.25	.29	1298	572.9	49.8	22.0
01.60	22.24	0.02	-0.03	22.22	.34	.38	1246	572.8	49.3	22.5
01.80	18.83	0.02	-0.03	18.82	.41	.45	1207	572.8	48.8	23.1
39702.00	18.21	0.03	-0.03	18.21	-15.43	-15.47	1200	572.7	48.3	23.6
02.25	17.76	0.04	-0.03	17.77	.44	.48	1194	572.6	47.7	24.2

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39702.50	17.32	0.04	-0.03	17.33	-15.45	-15.49	1188	572.6	47.1	24.9
02.75	16.85	0.05	-0.03	16.88	.46	.50	1183	572.5	46.5	25.5
03.00	16.38	0.06	-0.03	16.41	.47	.52	1176	572.5	45.9	26.2
03.25	15.98	0.07	-0.02	16.03	.48	.53	1171	572.4	45.2	26.9
03.50	15.75	0.08	-0.02	15.81	.49	.53	1168	572.4	44.6	27.5
03.75	15.95	0.09	-0.02	16.02	.48	.53	1170	572.3	43.9	28.2
04.00	15.58	0.10	-0.02	15.66	.49	.54	1165	572.3	43.3	28.8
04.25	15.18	0.11	-0.02	15.27	.50	.55	1160	572.2	42.7	29.5
04.50	14.57	0.12	-0.02	14.68	.52	.57	1151	572.2	42.0	30.1
04.75	14.01	0.13	-0.02	14.13	.54	.59	1143	572.2	41.3	30.8
05.00	13.71	0.14	-0.01	13.84	.55	.60	1138	572.2	40.7	31.4
05.25	13.55	0.15	-0.01	13.69	.55	.60	1136	572.1	40.0	32.1
05.50	13.41	0.16	-0.01	13.56	.56	.61	1133	572.1	39.3	32.8
05.75	13.47	0.18	-0.01	13.64	.56	.60	1134	572.1	38.7	33.4
06.00	13.73	0.18	-0.01	13.91	.55	.60	1138	572.1	38.0	34.1
06.25	13.80	0.19	-0.01	13.99	.55	.59	1139	572.1	37.3	34.7
06.50	13.98	0.20	-0.01	14.18	.54	.59	1141	572.1	36.6	35.4
06.75	13.86	0.21	-0.01	14.07	.55	.59	1139	572.1	35.9	36.0
07.00	14.17	0.22	0.00	14.39	.54	.58	1143	572.1	35.2	36.7
07.25	14.39	0.24	0.00	14.63	.53	.58	1146	572.2	34.5	37.3
07.50	14.35	0.25	0.00	14.60	.53	.58	1145	572.2	33.8	38.0
07.75	13.61	0.26	0.00	13.87	.56	.60	1134	572.2	33.0	38.6
08.00	12.63	0.27	0.00	12.90	.59	.64	1119	572.2	32.3	39.3
08.25	12.41	0.28	0.00	12.70	.60	.64	1115	572.3	31.5	39.9
08.50	12.41	0.29	0.00	12.71	.60	.64	1115	572.3	30.8	40.6
08.75	12.38	0.30	0.01	12.68	.60	.65	1114	572.4	30.0	41.2
09.00	11.88	0.31	0.01	12.20	.62	.66	1106	572.4	29.2	41.9
09.25	11.91	0.32	0.01	12.24	.62	.66	1107	572.5	28.5	42.5
09.50	11.60	0.33	0.01	11.94	.63	.67	1101	572.5	27.7	43.2
39770.60	11.89	-0.18	-0.05	11.66	-15.70	-15.58	1028	599.8	109.5	-28.0
70.80	11.55	-0.15	-0.05	11.35	.71	.59	1024	599.9	109.1	-28.4
71.00	10.92	-0.13	-0.05	10.74	.74	.61	1015	600.0	108.6	-28.9
71.20	11.07	-0.11	-0.05	10.92	.74	.61	1016	600.2	108.1	-29.3
71.40	12.17	-0.08	-0.05	12.04	.70	.57	1031	600.3	107.7	-29.7
71.60	12.85	-0.06	-0.05	12.75	.67	.54	1042	600.4	107.2	-30.1
71.80	12.46	-0.03	-0.04	12.39	.67	.55	1040	600.6	106.7	-30.6
72.00	12.08	0.00	-0.04	12.04	.69	.56	1036	600.7	106.2	-31.0
72.20	12.53	0.00	-0.04	12.48	.67	.54	1041	600.8	105.8	-31.4
72.40	13.08	0.00	-0.04	13.04	.65	.52	1048	601.0	105.3	-31.8
72.60	13.11	0.00	-0.04	13.06	.65	.52	1048	601.1	104.8	-32.3
72.80	13.13	0.00	-0.04	13.08	.65	.52	1048	601.2	104.3	-32.7
73.00	15.18	0.00	-0.04	15.13	.59	.45	1074	601.4	103.9	-33.1
73.20	17.15	0.00	-0.04	17.11	.53	.40	1098	601.5	103.4	-33.5
73.40	16.06	0.00	-0.04	16.01	.56	.43	1086	601.7	102.9	-34.0
73.60	16.08	0.00	-0.04	16.03	.56	.43	1086	601.8	102.4	-34.4
73.80	16.48	0.00	-0.04	16.44	.54	.41	1091	601.9	101.9	-34.8
74.00	15.25	0.00	-0.04	15.20	.58	.45	1078	602.1	101.4	-35.2
74.20	14.39	0.00	-0.04	14.35	.60	.47	1067	602.2	100.9	-35.6
74.40	14.20	0.00	-0.04	14.16	.61	.48	1064	602.4	100.4	-36.1
74.60	13.89	0.00	-0.04	13.84	.62	.48	1060	602.5	99.9	-36.5
74.80	13.38	0.00	-0.04	13.34	.64	.50	1056	602.7	99.4	-36.9
75.00	14.00	0.00	-0.04	13.96	.61	.48	1064	602.8	98.9	-37.3
75.20	14.15	0.00	-0.04	14.11	.61	.47	1066	602.9	98.4	-37.8
75.40	14.06	0.00	-0.04	14.02	.61	.47	1066	603.1	97.9	-38.2
75.60	14.14	0.00	-0.04	14.10	.61	.47	1067	603.2	97.4	-38.6
75.80	14.15	0.00	-0.04	14.11	.61	.47	1067	603.4	96.9	-39.0
76.00	14.22	0.00	-0.04	14.18	.61	.47	1068	603.5	96.4	-39.4
76.20	14.42	0.00	-0.04	14.38	.60	.46	1071	603.7	95.9	-39.9

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39776.40	14.27	0.00	-0.04	14.23	-15.60	-15.46	1069	603.8	95.3	-40.3
76.60	14.02	0.00	-0.04	13.98	.61	.47	1066	604.0	94.8	-40.7
76.80	13.83	0.00	-0.04	13.79	.62	.47	1064	604.1	94.3	-41.1
77.00	13.50	0.00	-0.04	13.46	.63	.48	1060	604.2	93.7	-41.5
77.20	13.19	0.00	-0.04	13.15	.64	.49	1056	604.4	93.2	-42.0
77.40	13.53	0.00	-0.04	13.49	.63	.48	1061	604.5	92.7	-42.4
77.60	13.75	0.00	-0.04	13.71	.62	.47	1064	604.7	92.1	-42.8
77.80	12.48	0.00	-0.04	12.44	.66	.51	1049	604.8	91.6	-43.2
78.00	12.83	0.00	-0.04	12.79	.65	.50	1054	605.0	91.0	-43.6
78.20	12.85	0.00	-0.04	12.81	.64	.50	1055	605.1	90.5	-44.1
78.40	12.38	0.00	-0.04	12.34	.66	.51	1048	605.3	89.9	-44.5
78.60	13.65	0.00	-0.04	13.62	.62	.47	1063	605.4	89.3	-44.9
78.80	13.65	0.00	-0.04	13.61	.62	.47	1063	605.6	88.8	-45.3
79.00	14.19	0.00	-0.04	14.15	.61	.45	1070	605.7	88.2	-45.7
79.20	15.06	0.00	-0.04	15.02	.58	.42	1081	605.9	87.6	-46.2
79.40	15.31	0.00	-0.03	15.28	.57	.41	1084	606.0	87.0	-46.6
79.60	13.98	0.00	-0.03	13.95	.61	.45	1068	606.2	86.4	-47.0
79.80	12.96	0.00	-0.03	12.92	.65	.48	1055	606.3	85.8	-47.4
80.00	13.68	0.00	-0.03	13.64	.62	.46	1064	606.5	85.2	-47.8
80.20	14.44	0.00	-0.03	14.40	.60	.44	1074	606.6	84.6	-48.2
80.40	14.83	0.00	-0.03	14.80	.59	.42	1079	606.7	84.0	-48.7
80.60	17.33	0.00	-0.03	17.30	.52	.36	1107	606.9	83.3	-49.1
80.80	16.94	0.00	-0.03	16.91	.53	.36	1103	607.0	82.7	-49.5
81.00	16.29	0.00	-0.03	16.26	.55	.38	1096	607.2	82.0	-49.9
81.20	16.25	0.00	-0.03	16.22	.55	.38	1096	607.3	81.4	-50.3
81.40	15.81	0.00	-0.03	15.78	.56	.39	1091	607.5	80.7	-50.7
81.60	14.21	0.00	-0.03	14.18	.61	.44	1073	607.6	80.1	-51.1
81.80	13.85	0.00	-0.03	13.82	.62	.45	1068	607.8	79.4	-51.6
82.00	14.16	0.00	-0.03	14.13	.61	.44	1071	607.9	78.7	-52.0
82.20	14.45	0.00	-0.03	14.42	.60	.43	1075	608.1	78.0	-52.4
82.40	14.18	0.00	-0.03	14.15	.61	.44	1072	608.2	77.3	-52.8
82.60	14.05	0.00	-0.02	14.03	.62	.44	1071	608.4	76.5	-53.2
82.80	13.81	0.00	-0.02	13.79	.62	.45	1067	608.5	75.8	-53.6
83.00	13.81	0.00	-0.02	13.79	.62	.45	1067	608.6	75.0	-54.0
83.20	15.58	0.00	-0.02	15.56	.57	.39	1088	608.8	74.3	-54.4
83.40	15.95	0.00	-0.02	15.93	.56	.38	1092	608.9	73.5	-54.8
83.60	15.65	0.00	-0.02	15.63	.57	.39	1089	609.1	72.7	-55.2
83.80	15.06	0.00	-0.02	15.04	.59	.41	1083	609.2	71.9	-55.6
84.00	14.96	0.00	-0.02	14.94	.59	.41	1082	609.4	71.1	-56.0
84.20	15.01	0.00	-0.02	15.00	.59	.41	1083	609.5	70.2	-56.4
84.40	14.90	0.00	-0.02	14.88	.59	.41	1081	609.7	69.4	-56.8
84.60	14.53	0.00	-0.02	14.52	.60	.42	1077	609.8	68.5	-57.2
84.80	14.47	0.00	-0.01	14.46	.61	.42	1077	609.9	67.6	-57.6
85.00	14.45	0.00	-0.01	14.43	.61	.42	1077	610.1	66.6	-58.0
39785.25	15.27	0.00	-0.01	15.26	-15.58	-15.40	1086	610.3	65.4	-58.5
85.50	17.22	0.00	-0.01	17.20	.53	.35	1107	610.4	64.2	-59.0
85.75	17.38	0.00	-0.01	17.37	.53	.34	1110	610.6	62.9	-59.5
86.00	17.55	0.00	-0.01	17.54	.52	.34	1113	610.8	61.6	-60.0
86.25	18.46	0.00	-0.01	18.45	.50	.32	1123	611.0	60.2	-60.4
86.50	18.38	0.00	-0.01	18.37	.50	.32	1122	611.2	58.8	-60.9
86.75	17.91	0.00	0.00	17.90	.51	.33	1116	611.3	57.3	-61.4
87.00	18.02	0.00	0.00	18.02	.51	.33	1117	611.5	55.7	-61.8
87.25	18.49	0.00	0.00	18.49	.50	.31	1122	611.7	54.0	-62.3
87.50	19.36	0.00	0.00	19.35	.48	.29	1130	611.9	52.3	-62.7
87.75	19.51	0.00	0.00	19.51	.48	.29	1132	612.0	50.5	-63.2
88.00	17.94	0.00	0.00	17.94	.52	.33	1116	612.2	48.6	-63.6
88.25	17.26	0.00	0.00	17.26	.54	.34	1109	612.4	46.6	-64.0
88.50	17.03	0.00	0.00	17.03	.55	.35	1106	612.6	44.5	-64.4
88.75	16.71	0.00	0.01	16.71	.55	.36	1103	612.7	42.2	-64.8

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39789.00	16.77	0.00	0.01	16.78	-15.55	-15.36	1104	612.9	39.9	-65.2
89.25	16.87	0.00	0.01	16.88	.55	.35	1105	613.1	37.3	-65.6
89.50	17.04	0.00	0.01	17.05	.55	.35	1106	613.3	34.7	-65.9
89.75	17.16	0.00	0.01	17.17	.55	.35	1107	613.4	31.8	-66.3
90.00	17.60	0.00	0.01	17.61	.54	.34	1112	613.6	28.8	-66.6
39790.20	18.39	0.00	0.01	18.40	-15.52	-15.32	1120	613.7	26.2	-66.8
90.40	21.07	0.00	0.01	21.08	.46	.26	1146	613.9	23.6	-67.1
90.60	23.58	0.00	0.01	23.59	.41	.21	1168	614.0	20.7	-67.3
90.80	24.03	0.00	0.01	24.04	.40	.20	1173	614.2	17.8	-67.4
91.00	23.52	0.00	0.02	23.54	.41	.21	1169	614.3	14.7	-67.6
91.20	22.30	0.00	0.02	22.32	.44	.24	1158	614.4	11.5	-67.7
91.40	26.90	0.00	0.02	26.91	.35	.16	1195	614.6	8.2	-67.9
91.60	29.57	0.00	0.02	29.59	.31	.12	1216	614.7	4.8	-68.0
91.80	27.45	0.00	0.02	27.47	.35	.15	1200	614.8	1.2	-68.0
92.00	26.89	0.00	0.02	26.91	.36	.16	1196	615.0	357.6	-68.1
92.20	26.85	0.00	0.02	26.87	.36	.16	1195	615.1	353.9	-68.1
92.40	26.86	0.00	0.02	26.89	.36	.16	1195	615.2	350.2	-68.1
92.60	26.45	0.00	0.02	26.48	.37	.17	1192	615.4	346.4	-68.0
92.80	27.13	0.00	0.03	27.16	.35	.16	1198	615.5	342.6	-67.9
93.00	25.30	0.00	0.03	25.32	.39	.19	1183	615.6	338.8	-67.8
93.20	22.23	0.00	0.03	22.26	.45	.25	1156	615.8	335.1	-67.7
93.40	21.21	0.00	0.03	21.24	.47	.27	1148	615.9	331.4	-67.5
93.60	18.30	0.00	0.03	18.33	.53	.33	1120	616.0	327.8	-67.3
93.80	18.37	0.00	0.03	18.40	.54	.33	1118	616.1	324.4	-67.1
94.00	17.91	0.00	0.03	17.94	.55	.34	1113	616.2	321.0	-66.9
94.20	17.49	0.00	0.03	17.52	.56	.35	1108	616.4	317.7	-66.6
94.40	17.43	0.00	0.03	17.47	.57	.35	1107	616.5	314.6	-66.3
94.60	17.63	0.00	0.03	17.67	.56	.35	1109	616.6	311.6	-66.0
94.80	17.80	0.00	0.04	17.84	.56	.34	1112	616.7	308.7	-65.7
95.00	17.36	0.00	0.04	17.40	.57	.35	1108	616.8	306.0	-65.3
95.20	17.71	0.00	0.04	17.75	.57	.34	1109	617.0	303.4	-64.9
95.40	17.73	0.00	0.04	17.77	.57	.34	1108	617.1	300.9	-64.6
95.60	17.95	0.00	0.04	17.99	.57	.34	1110	617.2	298.5	-64.2
95.80	18.17	0.00	0.04	18.21	.56	.33	1111	617.3	296.2	-63.8
96.00	16.86	0.00	0.04	16.91	.60	.37	1099	617.4	294.1	-63.3
96.20	16.82	0.00	0.04	16.87	.60	.37	1099	617.5	292.0	-62.9
96.40	17.00	0.00	0.04	17.05	.59	.36	1101	617.6	290.1	-62.5
96.60	17.09	0.00	0.04	17.13	.59	.36	1101	617.7	288.2	-62.0
96.80	17.03	0.00	0.05	17.08	.60	.36	1100	617.8	286.4	-61.5
97.00	17.73	0.00	0.05	17.77	.58	.35	1108	617.9	284.7	-61.1
97.20	17.35	0.00	0.05	17.40	.59	.36	1105	618.0	283.1	-60.6
97.40	15.21	0.00	0.05	15.26	.65	.42	1081	618.1	281.5	-60.1
97.60	11.57	0.00	0.05	11.62	.77	.54	1037	618.2	280.0	-59.6
97.80	21.06	0.00	0.05	21.11	.50	.28	1140	618.3	278.6	-59.1
98.00	18.72	0.01	0.05	18.79	.55	.33	1120	618.4	277.2	-58.6
98.20	15.62	0.04	0.05	15.71	.63	.41	1088	618.5	275.9	-58.1
98.40	12.97	0.07	0.05	13.09	.72	.49	1056	618.5	274.6	-57.6
98.60	10.38	0.10	0.05	10.53	.82	.58	1020	618.6	273.3	-57.1
98.80	10.76	0.13	0.05	10.95	.81	.57	1025	618.7	272.1	-56.6
39846.25	12.23	-0.26	-0.01	11.96	-15.82	-15.64	1048	609.9	142.8	72.3
46.50	11.70	-0.26	-0.01	11.43	.84	.66	1040	609.8	142.1	73.0
46.75	11.40	-0.27	-0.01	11.13	.84	.67	1037	609.6	141.4	73.6
47.00	11.30	-0.27	-0.01	11.02	.85	.67	1037	609.5	140.6	74.2
47.25	13.14	-0.28	-0.01	12.85	.77	.60	1066	609.4	139.9	74.8
47.50	12.44	-0.28	-0.01	12.15	.80	.62	1056	609.3	139.1	75.5
47.75	10.80	-0.29	-0.01	10.50	.86	.68	1030	609.2	138.4	76.1
48.00	10.29	-0.29	-0.01	9.99	.88	.70	1022	609.0	137.6	76.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39848.25	9.35	-0.29	-0.01	9.05	-15.93	-15.75	1005	608.9	136.8	77.4
48.50	9.07	-0.30	-0.01	8.76	.94	.76	998	608.8	136.0	78.0
48.75	8.78	-0.30	-0.01	8.46	.96	.78	993	608.7	135.3	78.6
49.00	8.55	-0.31	-0.01	8.23	.96	.79	990	608.6	134.5	79.2
49.25	8.45	-0.31	-0.01	8.13	.97	.79	988	608.4	133.7	79.8
49.50	8.45	-0.31	-0.01	8.12	.97	.79	988	608.3	132.8	80.5
49.75	8.25	-0.32	-0.01	7.91	.98	.80	984	608.2	132.0	81.1
50.00	7.43	-0.32	-0.01	7.10	-16.02	.85	968	608.1	131.2	81.7
50.25	5.76	-0.32	-0.02	5.42	.13	.96	929	608.0	130.3	82.3
50.50	5.07	-0.33	-0.02	4.73	.19	-16.01	910	607.8	129.4	82.9
50.75	11.09	-0.33	-0.02	10.74	-15.82	-15.65	1043	607.7	128.6	83.5
51.00	14.44	-0.33	-0.02	14.09	.70	.53	1094	607.6	127.7	84.1
51.25	11.85	-0.34	-0.02	11.50	.78	.62	1058	607.5	126.7	84.8
51.50	10.24	-0.34	-0.02	9.88	.85	.68	1034	607.4	125.8	85.4
51.75	9.91	-0.34	-0.02	9.55	.85	.69	1030	607.2	124.9	86.0
52.00	9.95	-0.35	-0.02	9.59	.85	.69	1032	607.1	123.9	86.6
52.25	9.45	-0.35	-0.02	9.08	.87	.71	1022	607.0	122.9	87.2
52.50	9.04	-0.35	-0.02	8.66	.89	.73	1015	606.9	121.9	87.8
52.75	9.00	-0.35	-0.02	8.63	.89	.73	1015	606.8	120.9	88.4
53.00	9.05	-0.35	-0.02	8.67	.88	.72	1019	606.6	119.8	88.9
53.25	8.98	-0.36	-0.02	8.61	.88	.72	1020	606.5	118.7	89.5
53.50	9.00	-0.36	-0.02	8.62	.88	.72	1021	606.4	117.6	90.1
53.75	8.71	-0.36	-0.02	8.32	.89	.73	1014	606.3	116.5	90.7
39854.00	7.81	-0.36	-0.02	7.43	-15.94	-15.78	995	606.2	115.3	91.3
54.20	8.35	-0.37	-0.02	7.96	.91	.75	1007	606.1	114.4	91.7
54.40	9.13	-0.37	-0.02	8.74	.87	.71	1024	606.0	113.4	92.2
54.60	10.51	-0.37	-0.02	10.12	.80	.65	1050	605.9	112.4	92.6
54.80	11.71	-0.37	-0.03	11.32	.75	.60	1071	605.8	111.3	93.1
55.00	13.61	-0.37	-0.03	13.21	.68	.53	1100	605.7	110.3	93.5
55.20	15.85	-0.37	-0.03	15.45	.61	.46	1130	605.6	109.2	94.0
55.40	18.74	-0.37	-0.03	18.35	.53	.39	1167	605.5	108.0	94.4
55.60	19.36	-0.37	-0.03	18.96	.52	.37	1175	605.4	106.9	94.9
55.80	19.43	-0.37	-0.03	19.03	.52	.37	1176	605.3	105.7	95.3
56.00	21.16	-0.37	-0.03	20.76	.48	.34	1195	605.3	104.4	95.7
56.20	20.41	-0.37	-0.03	20.01	.50	.35	1186	605.2	103.1	96.2
56.40	15.04	-0.37	-0.03	14.63	.63	.49	1120	605.1	101.8	96.6
56.60	12.74	-0.37	-0.03	12.34	.71	.56	1087	605.0	100.4	97.0
56.80	12.47	-0.37	-0.03	12.06	.72	.58	1081	604.9	99.0	97.4
57.00	12.53	-0.37	-0.03	12.13	.72	.58	1081	604.8	97.5	97.8
57.20	12.70	-0.37	-0.03	12.30	.72	.57	1083	604.7	95.9	98.2
57.40	13.74	-0.37	-0.03	13.34	.68	.54	1099	604.6	94.3	98.6
57.60	15.58	-0.37	-0.03	15.18	.62	.48	1127	604.5	92.6	99.0
57.80	18.04	-0.37	-0.03	17.64	.55	.42	1157	604.5	90.9	99.4
58.00	15.81	-0.37	-0.03	15.41	.62	.48	1128	604.4	89.0	99.8
58.20	12.75	-0.37	-0.03	12.35	.71	.57	1084	604.3	87.1	100.1
58.40	10.29	-0.37	-0.03	9.90	.81	.67	1043	604.2	85.1	100.5
58.60	9.79	-0.37	-0.03	9.40	.84	.70	1033	604.1	83.0	100.8
58.80	9.38	-0.36	-0.03	8.99	.86	.72	1023	604.0	80.7	101.2
59.00	9.04	-0.36	-0.03	8.65	.88	.74	1016	603.9	78.4	101.5
59.20	8.83	-0.36	-0.03	8.44	.89	.75	1013	603.9	76.0	101.8
59.40	9.28	-0.36	-0.03	8.89	.87	.72	1021	603.8	73.4	102.1
59.60	9.93	-0.36	-0.03	9.54	.84	.70	1033	603.7	70.7	102.4
59.80	10.33	-0.36	-0.03	9.94	.82	.68	1040	603.6	67.9	102.6
60.00	11.65	-0.35	-0.03	11.26	.76	.62	1063	603.5	64.9	102.9
60.20	13.62	-0.35	-0.03	13.24	.69	.55	1094	603.4	61.9	103.1
60.40	12.91	-0.35	-0.03	12.53	.71	.58	1083	603.4	58.7	103.3
60.60	13.04	-0.34	-0.03	12.67	.71	.57	1085	603.3	55.3	103.4
60.80	13.45	-0.34	-0.03	13.08	.70	.56	1091	603.2	51.9	103.6
61.00	16.17	-0.34	-0.03	15.80	.61	.48	1128	603.1	48.3	103.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39861.20	17.36	-0.33	-0.03	17.00	-15.58	-15.45	1143	603.1	44.7	103.8
61.40	14.85	-0.32	-0.03	14.50	.65	.52	1111	603.0	41.0	103.9
61.60	14.55	-0.32	-0.03	14.20	.66	.53	1107	602.9	37.2	103.9
61.80	15.31	-0.31	-0.03	14.96	.64	.50	1117	602.8	33.4	103.9
62.00	15.33	-0.30	-0.03	15.00	.63	.50	1118	602.7	29.6	103.9
62.20	13.46	-0.30	-0.03	13.13	.69	.56	1092	602.7	25.8	103.8
62.40	13.14	-0.29	-0.03	12.81	.70	.57	1087	602.6	22.0	103.7
62.60	12.87	-0.28	-0.03	12.55	.71	.58	1084	602.5	18.3	103.6
62.80	12.73	-0.27	-0.03	12.42	.72	.59	1081	602.4	14.7	103.5
63.00	12.61	-0.27	-0.03	12.31	.72	.59	1079	602.4	11.2	103.3
63.20	12.47	-0.26	-0.03	12.18	.73	.60	1078	602.3	7.8	103.1
63.40	12.22	-0.25	-0.03	11.94	.73	.61	1074	602.2	4.5	102.9
63.60	12.30	-0.24	-0.03	12.03	.73	.60	1075	602.2	1.3	102.6
63.80	12.58	-0.22	-0.03	12.33	.72	.59	1081	602.1	358.2	102.4
64.00	11.75	-0.21	-0.03	11.51	.75	.62	1068	602.0	355.3	102.1
64.20	10.76	-0.20	-0.03	10.53	.79	.66	1051	601.9	352.5	101.8
64.40	10.66	-0.18	-0.03	10.45	.79	.66	1050	601.9	349.9	101.4
64.60	10.61	-0.17	-0.03	10.41	.79	.67	1049	601.8	347.3	101.1
64.80	10.81	-0.15	-0.03	10.63	.78	.66	1053	601.7	344.9	100.7
65.00	11.37	-0.14	-0.03	11.20	.76	.63	1063	601.6	342.6	100.4
65.20	12.74	-0.12	-0.03	12.59	.71	.58	1085	601.6	340.4	100.0
65.40	13.78	-0.10	-0.03	13.64	.67	.55	1100	601.5	338.3	99.6
65.60	13.71	-0.08	-0.03	13.60	.67	.55	1100	601.4	336.3	99.2
65.80	12.50	-0.06	-0.03	12.41	.71	.59	1082	601.4	334.4	98.8
66.00	11.92	-0.03	-0.03	11.86	.73	.61	1073	601.3	332.6	98.4
66.20	11.37	0.00	-0.03	11.34	.75	.63	1065	601.2	330.8	97.9
66.40	12.55	0.00	-0.03	12.52	.71	.59	1083	601.2	329.2	97.5
66.60	14.24	0.00	-0.03	14.21	.66	.53	1107	601.1	327.6	97.0
66.80	17.22	0.00	-0.03	17.19	.58	.46	1143	601.0	326.0	96.6
67.00	19.68	0.00	-0.03	19.65	.52	.40	1171	601.0	324.6	96.1
67.20	20.60	0.00	-0.03	20.57	.50	.38	1180	600.9	323.1	95.7
67.40	20.76	0.00	-0.03	20.73	.50	.38	1181	600.8	321.8	95.2
67.60	20.84	0.00	-0.03	20.81	.50	.38	1181	600.8	320.4	94.7
67.80	18.02	0.00	-0.03	17.99	.56	.44	1151	600.7	319.1	94.3
68.00	16.20	0.00	-0.03	16.17	.61	.49	1129	600.6	317.9	93.8
68.20	16.06	0.00	-0.03	16.03	.61	.49	1127	600.6	316.7	93.3
68.40	15.89	0.00	-0.03	15.86	.62	.50	1124	600.5	315.6	92.8
68.60	15.10	0.00	-0.03	15.07	.64	.52	1113	600.4	314.4	92.3
68.80	13.89	0.00	-0.03	13.86	.68	.56	1096	600.4	313.3	91.8
69.00	15.15	0.00	-0.03	15.12	.64	.52	1112	600.3	312.3	91.3
69.20	16.24	0.00	-0.03	16.21	.61	.49	1126	600.2	311.3	90.8
69.40	18.28	0.00	-0.03	18.25	.56	.44	1150	600.2	310.3	90.3
69.60	15.44	0.00	-0.03	15.42	.64	.52	1115	600.1	309.3	89.8
69.80	12.89	0.00	-0.03	12.86	.72	.60	1079	600.0	308.3	89.3
70.00	13.51	0.00	-0.03	13.48	.70	.58	1088	600.0	307.4	88.8
70.20	14.29	0.00	-0.03	14.26	.67	.55	1099	599.9	306.5	88.3
70.40	13.69	0.00	-0.03	13.66	.69	.57	1090	599.8	305.6	87.7
70.60	12.83	0.00	-0.03	12.81	.72	.61	1076	599.8	304.7	87.2
70.80	11.48	0.00	-0.03	11.46	.77	.66	1056	599.7	303.9	86.7
71.00	10.84	0.00	-0.03	10.81	.80	.68	1046	599.6	303.0	86.2
71.20	12.01	0.00	-0.03	11.98	.75	.64	1064	599.6	302.2	85.7
71.40	11.89	0.00	-0.03	11.86	.76	.64	1061	599.5	301.4	85.1
71.60	10.94	0.00	-0.03	10.91	.80	.68	1044	599.4	300.6	84.6
71.80	9.53	0.00	-0.03	9.50	.86	.74	1020	599.3	299.9	84.1
72.00	12.97	0.00	-0.03	12.94	.73	.61	1076	599.3	299.1	83.6
72.20	12.49	0.00	-0.03	12.46	.74	.63	1068	599.2	298.3	83.0
72.40	12.58	0.00	-0.03	12.55	.74	.63	1068	599.1	297.6	82.5
72.60	12.22	0.00	-0.03	12.19	.76	.64	1062	599.1	296.9	82.0
72.80	10.74	0.00	-0.03	10.72	.82	.70	1038	599.0	296.2	81.5
73.00	10.77	0.00	-0.03	10.74	.82	.70	1037	598.9	295.4	80.9

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39873.20	11.34	0.00	-0.03	11.31	-15.79	-15.68	1047	598.9	294.7	80.4
73.40	10.04	0.00	-0.02	10.01	.85	.73	1025	598.8	294.1	79.9
73.60	9.29	0.00	-0.02	9.26	.89	.77	1010	598.7	293.4	79.3
73.80	8.39	0.00	-0.02	8.36	.94	.82	992	598.7	292.7	78.8
74.00	7.97	0.00	-0.02	7.94	.96	.85	982	598.6	292.0	78.3
39874.25	7.99	0.00	-0.02	7.97	-15.97	-15.85	980	598.5	291.2	77.6
74.50	9.00	0.00	-0.02	8.98	.91	.80	1000	598.5	290.4	76.9
74.75	9.64	0.00	-0.02	9.62	.88	.77	1012	598.4	289.6	76.2
75.00	9.53	0.00	-0.02	9.51	.89	.77	1010	598.3	288.8	75.6
75.25	9.81	0.00	-0.02	9.79	.87	.76	1015	598.2	288.0	74.9
75.50	9.74	0.00	-0.02	9.72	.88	.77	1012	598.1	287.3	74.2
75.75	9.23	0.00	-0.02	9.21	.91	.79	1002	598.0	286.5	73.5
76.00	8.60	0.00	-0.02	8.58	.95	.83	988	598.0	285.8	72.9
76.25	7.94	0.00	-0.02	7.92	.99	.87	972	597.9	285.0	72.2
76.50	7.37	0.00	-0.02	7.35	-16.02	.91	961	597.8	284.3	71.5
76.75	6.60	0.00	-0.02	6.58	.07	.95	944	597.7	283.5	70.8
77.00	6.39	0.00	-0.02	6.37	.09	.97	938	597.6	282.8	70.1
77.25	6.55	0.00	-0.02	6.53	.08	.97	940	597.6	282.1	69.5
77.50	6.71	0.00	-0.02	6.69	.07	.96	943	597.5	281.4	68.8
77.75	6.86	0.00	-0.02	6.84	.06	.95	946	597.4	280.7	68.1
78.00	7.11	0.00	-0.02	7.09	.05	.94	951	597.3	280.0	67.4
78.25	7.14	0.00	-0.02	7.12	.05	.94	951	597.2	279.3	66.7
78.50	7.03	0.00	-0.02	7.01	.06	.95	947	597.2	278.6	66.0
78.75	6.85	0.00	-0.02	6.83	.08	.96	942	597.1	277.9	65.3
79.00	6.61	0.00	-0.02	6.59	.09	.98	938	597.0	277.2	64.6
79.25	6.86	0.00	-0.02	6.84	.07	.96	943	596.9	276.5	63.9
79.50	6.93	0.00	-0.02	6.91	.07	.96	943	596.9	275.9	63.2
79.75	6.98	0.00	-0.02	6.97	.07	.96	945	596.8	275.2	62.5
80.00	7.10	0.00	-0.02	7.08	.06	.95	948	596.7	274.5	61.8
80.25	7.15	0.00	-0.02	7.14	.06	.95	948	596.6	273.9	61.2
80.50	6.95	0.00	-0.02	6.93	.08	.97	941	596.6	273.2	60.5
80.75	7.00	0.00	-0.01	6.99	.07	.96	942	596.5	272.6	59.8
81.00	7.32	0.00	-0.01	7.31	.05	.94	949	596.4	271.9	59.1
81.25	7.88	0.00	-0.01	7.87	.02	.91	961	596.3	271.3	58.4
81.50	8.45	0.00	-0.01	8.43	-15.99	.88	973	596.3	270.6	57.7
81.75	10.44	0.00	-0.01	10.43	.89	.78	1009	596.2	270.0	57.0
82.00	10.72	0.00	-0.01	10.71	.87	.77	1014	596.1	269.4	56.3
82.25	10.38	0.00	-0.01	10.36	.89	.78	1007	596.1	268.7	55.6
82.50	9.41	0.00	-0.01	9.39	.94	.83	990	596.0	268.1	54.9
82.75	8.61	0.00	-0.01	8.60	.97	.87	976	595.9	267.5	54.2
83.00	8.84	0.00	-0.01	8.83	.96	.85	981	595.9	266.8	53.4
83.25	9.63	0.00	-0.01	9.62	.92	.81	997	595.8	266.2	52.7
83.50	9.61	0.00	-0.01	9.60	.92	.82	994	595.7	265.6	52.0
83.75	9.37	0.00	-0.01	9.36	.94	.84	988	595.6	265.0	51.3
84.00	10.08	0.00	-0.01	10.07	.90	.80	1003	595.6	264.4	50.6
84.25	11.22	0.00	-0.01	11.21	.84	.74	1023	595.5	263.7	49.9
84.50	11.82	0.00	-0.01	11.81	.82	.73	1030	595.4	263.1	49.2
84.75	11.19	0.00	-0.01	11.18	.85	.75	1018	595.4	262.5	48.5
85.00	10.93	0.00	-0.01	10.92	.86	.76	1016	595.3	261.9	47.8
85.25	11.90	0.00	-0.01	11.89	.82	.72	1032	595.2	261.3	47.1
85.50	11.24	0.00	-0.01	11.23	.84	.75	1021	595.1	260.7	46.4
85.75	9.98	0.00	-0.01	9.97	.90	.81	1000	595.1	260.1	45.7
86.00	10.58	0.00	-0.01	10.58	.88	.78	1008	595.0	259.5	45.0
86.25	11.39	0.00	-0.01	11.38	.84	.75	1021	594.9	258.9	44.3
86.50	11.70	0.00	-0.01	11.69	.83	.74	1026	594.9	258.3	43.6
86.75	11.71	0.00	-0.01	11.70	.84	.74	1024	594.8	257.7	42.8
87.00	11.55	0.00	-0.01	11.54	.85	.75	1019	594.7	257.1	42.1
87.25	10.83	0.00	-0.01	10.82	.88	.78	1008	594.6	256.5	41.4
87.50	11.01	0.00	-0.01	11.01	.86	.77	1013	594.6	255.9	40.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39887.75	10.99	0.00	-0.01	10.98	-15.86	-15.77	1013	594.5	255.3	40.0
39950.40	22.43	-0.24	-0.04	22.15	-15.41	-15.23	1038	557.6	322.4	-40.5
50.60	22.89	-0.24	-0.04	22.61	.40	.22	1039	557.5	321.9	-40.0
50.80	22.85	-0.23	-0.04	22.58	.41	.23	1038	557.4	321.4	-39.6
51.00	22.20	-0.23	-0.04	21.93	.42	.24	1032	557.3	320.9	-39.1
51.20	20.52	-0.22	-0.04	20.26	.46	.28	1017	557.2	320.5	-38.7
51.40	19.80	-0.22	-0.04	19.54	.47	.30	1010	557.1	320.0	-38.2
51.60	21.62	-0.21	-0.04	21.37	.44	.26	1024	557.0	319.5	-37.8
51.80	30.23	-0.20	-0.04	29.98	.29	.11	1085	556.9	319.0	-37.3
52.00	32.91	-0.20	-0.04	32.68	.25	.08	1103	556.9	318.6	-36.9
52.20	31.46	-0.19	-0.04	31.23	.27	.11	1094	556.8	318.1	-36.4
52.40	28.36	-0.19	-0.04	28.13	.32	.15	1073	556.7	317.6	-35.9
52.60	27.26	-0.18	-0.04	27.04	.34	.17	1065	556.6	317.1	-35.5
52.80	23.33	-0.17	-0.04	23.12	.41	.24	1036	556.5	316.7	-35.0
53.00	21.69	-0.17	-0.04	21.49	.44	.27	1021	556.5	316.2	-34.6
53.20	18.61	-0.16	-0.03	18.42	.51	.34	994	556.4	315.7	-34.1
53.40	17.00	-0.15	-0.03	16.81	.55	.38	978	556.3	315.3	-33.7
53.60	17.06	-0.15	-0.03	16.88	.55	.38	978	556.2	314.8	-33.2
53.80	16.49	-0.14	-0.03	16.32	.57	.40	972	556.2	314.3	-32.8
54.00	15.68	-0.13	-0.03	15.52	.60	.42	962	556.1	313.9	-32.3
54.20	14.79	-0.12	-0.03	14.63	.63	.45	952	556.0	313.4	-31.9
54.40	14.02	-0.12	-0.03	13.87	.65	.47	944	556.0	312.9	-31.4
54.60	13.59	-0.11	-0.03	13.45	.67	.49	938	555.9	312.5	-31.0
54.80	14.81	-0.10	-0.03	14.68	.63	.45	950	555.8	312.0	-30.5
55.00	14.30	-0.09	-0.03	14.18	.65	.47	944	555.8	311.5	-30.1
55.20	13.84	-0.08	-0.03	13.73	.67	.49	938	555.7	311.1	-29.6
55.40	12.95	-0.07	-0.03	12.85	.70	.52	928	555.7	310.6	-29.1
55.60	12.44	-0.06	-0.03	12.35	.71	.53	922	555.6	310.2	-28.7
55.80	12.21	-0.05	-0.03	12.13	.72	.54	919	555.6	309.7	-28.2
56.00	12.67	-0.04	-0.03	12.60	.70	.53	925	555.5	309.2	-27.8
56.20	13.66	-0.04	-0.03	13.59	.67	.50	937	555.4	308.8	-27.3
56.40	14.74	-0.03	-0.02	14.69	.63	.46	949	555.4	308.3	-26.9
56.60	15.23	-0.02	-0.02	15.18	.62	.45	953	555.4	307.9	-26.4
56.80	15.45	-0.01	-0.02	15.41	.62	.44	954	555.3	307.4	-26.0
57.00	15.79	0.00	-0.02	15.77	.61	.44	958	555.3	307.0	-25.5
57.20	16.19	0.00	-0.02	16.17	.60	.43	962	555.2	306.5	-25.1
57.40	17.23	0.00	-0.02	17.21	.57	.40	972	555.2	306.0	-24.6
57.60	16.45	0.00	-0.02	16.43	.59	.42	964	555.1	305.6	-24.2
57.80	14.41	0.00	-0.02	14.38	.65	.48	944	555.1	305.1	-23.7
58.00	14.84	0.00	-0.02	14.82	.64	.47	948	555.0	304.7	-23.2
58.20	14.63	0.00	-0.02	14.61	.65	.48	944	555.0	304.2	-22.8
58.40	14.45	0.00	-0.02	14.43	.65	.48	942	555.0	303.8	-22.3
58.60	15.24	0.00	-0.02	15.22	.63	.46	949	554.9	303.3	-21.9
58.80	16.56	0.00	-0.02	16.54	.60	.43	961	554.9	302.9	-21.4
59.00	17.98	0.00	-0.02	17.96	.56	.39	975	554.9	302.4	-21.0
59.20	17.87	0.00	-0.02	17.85	.56	.40	974	554.8	302.0	-20.5
59.40	16.52	0.00	-0.02	16.51	.60	.43	962	554.8	301.5	-20.0
59.60	17.66	0.00	-0.02	17.64	.57	.41	971	554.7	301.1	-19.6
59.80	19.53	0.00	-0.02	19.51	.53	.36	987	554.7	300.6	-19.1
60.00	18.74	0.00	-0.02	18.72	.54	.38	980	554.7	300.2	-18.7
60.20	16.51	0.00	-0.02	16.50	.60	.44	961	554.7	299.7	-18.2
60.40	16.33	0.00	-0.01	16.32	.61	.44	958	554.6	299.3	-17.8
60.60	17.19	0.00	-0.01	17.17	.59	.42	965	554.6	298.8	-17.3
60.80	17.09	0.00	-0.01	17.07	.59	.43	965	554.6	298.4	-16.8
61.00	16.36	0.00	-0.01	16.35	.61	.45	958	554.5	297.9	-16.4
61.20	15.86	0.00	-0.01	15.85	.63	.46	951	554.5	297.5	-15.9
61.40	15.37	0.00	-0.01	15.36	.65	.48	945	554.5	297.0	-15.5
61.60	15.54	0.00	-0.01	15.52	.64	.48	947	554.4	296.6	-15.0

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39961.80	16.65	0.00	-0.01	16.64	-15.61	-15.45	957	554.4	296.1	-14.6
62.00	16.99	0.00	-0.01	16.97	.60	.44	960	554.4	295.7	-14.1
62.20	16.22	0.00	-0.01	16.21	.62	.46	953	554.4	295.2	-13.6
62.40	15.53	0.00	-0.01	15.52	.65	.48	946	554.3	294.8	-13.2
62.60	15.01	0.00	-0.01	15.00	.66	.50	940	554.3	294.3	-12.7
62.80	14.92	0.00	-0.01	14.91	.67	.50	938	554.3	293.8	-12.3
63.00	14.80	0.00	-0.01	14.79	.67	.50	937	554.3	293.4	-11.8
63.20	14.93	0.00	-0.01	14.91	.67	.50	938	554.3	292.9	-11.3
63.40	15.07	0.00	-0.01	15.06	.67	.50	939	554.2	292.5	-10.9
63.60	15.28	0.00	-0.01	15.27	.66	.49	941	554.2	292.0	-10.4
63.80	15.39	0.00	-0.01	15.38	.66	.49	942	554.2	291.6	-10.0
64.00	15.16	0.00	-0.01	15.15	.67	.50	939	554.2	291.1	-9.5
64.20	14.73	0.00	-0.01	14.72	.68	.51	935	554.1	290.7	-9.0
64.40	14.31	0.00	-0.01	14.30	.69	.53	930	554.1	290.2	-8.6
64.60	14.02	0.00	-0.01	14.01	.71	.54	927	554.1	289.8	-8.1
64.80	13.78	0.00	-0.01	13.77	.72	.55	923	554.1	289.3	-7.6
65.00	13.32	0.00	-0.01	13.31	.73	.56	918	554.1	288.9	-7.2
65.20	12.89	0.00	-0.01	12.88	.75	.58	913	554.1	288.4	-6.7
65.40	12.32	0.00	-0.01	12.31	.77	.60	905	554.0	288.0	-6.3
65.60	12.16	0.00	-0.01	12.15	.78	.61	902	554.0	287.5	-5.8
65.80	12.16	0.00	-0.01	12.15	.79	.61	901	554.0	287.1	-5.3
66.00	11.85	0.00	-0.01	11.84	.80	.62	897	554.0	286.6	-4.9
66.20	11.41	0.00	-0.01	11.40	.82	.64	892	554.0	286.2	-4.4
66.40	11.20	0.00	-0.01	11.19	.83	.65	890	553.9	285.7	-4.0
66.60	11.07	0.00	-0.01	11.06	.83	.65	888	553.9	285.3	-3.5
66.80	10.86	0.00	-0.01	10.85	.84	.66	885	553.9	284.8	-3.0
67.00	10.77	0.00	-0.01	10.76	.85	.67	883	553.9	284.4	-2.6
67.20	10.74	0.00	-0.01	10.73	.85	.67	882	553.9	283.9	-2.1
67.40	10.79	0.00	-0.01	10.78	.85	.67	883	553.8	283.4	-1.6
67.60	10.97	0.00	-0.01	10.96	.84	.66	887	553.8	283.0	-1.2
67.80	11.25	0.00	-0.01	11.24	.83	.65	890	553.8	282.5	-0.7
68.00	11.67	0.00	-0.01	11.66	.81	.63	896	553.8	282.1	-0.3
68.20	12.13	0.00	-0.01	12.12	.79	.62	901	553.8	281.6	0.2
68.40	12.33	0.00	-0.01	12.32	.78	.61	905	553.8	281.2	0.7
68.60	13.62	0.00	-0.01	13.61	.74	.56	919	553.8	280.7	1.1
68.80	14.39	0.00	-0.01	14.38	.71	.54	927	553.7	280.3	1.6
69.00	14.80	0.00	-0.01	14.79	.70	.53	931	553.7	279.8	2.1
69.20	14.81	0.00	-0.01	14.80	.70	.53	932	553.7	279.3	2.5
69.40	15.43	0.00	-0.01	15.42	.68	.51	939	553.7	278.9	3.0
69.60	14.80	0.00	-0.01	14.79	.70	.53	932	553.7	278.4	3.5
69.80	14.15	0.00	-0.01	14.14	.73	.55	924	553.7	278.0	3.9
70.00	13.55	0.00	-0.01	13.54	.75	.57	918	553.7	277.5	4.4
70.20	13.58	0.00	-0.01	13.57	.74	.57	919	553.7	277.0	4.9
70.40	13.74	0.00	-0.01	13.73	.74	.56	921	553.7	276.6	5.3
70.60	13.47	0.00	-0.01	13.46	.75	.57	917	553.7	276.1	5.8
70.80	12.24	0.00	-0.01	12.23	.80	.62	902	553.7	275.6	6.3
71.00	11.52	0.00	-0.01	11.51	.83	.65	893	553.7	275.2	6.7
71.20	11.40	0.00	-0.01	11.39	.84	.65	890	553.7	274.7	7.2
71.40	11.50	0.00	-0.01	11.49	.83	.65	891	553.7	274.2	7.7
71.60	11.29	0.00	-0.01	11.28	.84	.66	890	553.7	273.8	8.1
71.80	11.47	0.00	-0.01	11.46	.83	.65	893	553.7	273.3	8.6
72.00	13.02	0.00	-0.01	13.01	.77	.59	912	553.6	272.8	9.1
72.20	15.43	0.00	-0.01	15.42	.69	.51	939	553.7	272.4	9.5
72.40	15.60	0.00	-0.01	15.59	.68	.51	942	553.7	271.9	10.0
72.60	15.38	0.00	-0.01	15.37	.68	.51	940	553.7	271.4	10.5
72.80	16.13	0.00	-0.01	16.12	.66	.49	948	553.7	271.0	10.9
73.00	16.60	0.00	-0.01	16.59	.65	.48	954	553.7	270.5	11.4
73.20	17.23	0.00	-0.01	17.22	.63	.46	961	553.7	270.0	11.9
73.40	15.48	0.00	-0.01	15.47	.68	.51	944	553.7	269.5	12.3
73.60	14.11	0.00	-0.01	14.10	.72	.55	930	553.7	269.1	12.8

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39973.80	13.25	0.00	-0.01	13.24	-15.75	-15.58	920	553.7	268.6	13.3
74.00	12.99	0.00	-0.01	12.98	.76	.59	917	553.7	268.1	13.7
74.20	13.64	0.00	-0.01	13.63	.74	.57	925	553.7	267.6	14.2
74.40	13.69	0.00	-0.01	13.68	.74	.56	926	553.7	267.1	14.7
74.60	13.24	0.00	-0.01	13.23	.75	.58	921	553.7	266.7	15.1
74.80	12.47	0.00	-0.01	12.46	.78	.61	912	553.7	266.2	15.6
75.00	12.40	0.00	-0.01	12.39	.78	.61	911	553.7	265.7	16.1
75.20	12.48	0.00	-0.01	12.47	.78	.60	914	553.7	265.2	16.5
75.40	13.18	0.00	-0.01	13.17	.75	.58	922	553.7	264.7	17.0
75.60	13.85	0.00	-0.01	13.84	.73	.56	930	553.8	264.2	17.5
75.80	14.25	0.00	-0.01	14.24	.72	.54	934	553.8	263.7	17.9
76.00	14.43	0.00	-0.01	14.42	.71	.54	936	553.8	263.3	18.4
76.20	13.85	0.00	-0.01	13.84	.73	.55	931	553.8	262.8	18.9
76.40	12.90	0.00	-0.01	12.89	.76	.59	920	553.8	262.3	19.4
76.60	12.42	0.00	-0.01	12.41	.78	.60	914	553.8	261.8	19.8
76.80	12.13	0.00	-0.01	12.12	.79	.61	911	553.9	261.3	20.3
77.00	12.23	0.00	-0.01	12.22	.79	.61	912	553.9	260.8	20.8
77.20	12.48	0.00	-0.01	12.46	.78	.60	916	553.9	260.3	21.2
77.40	12.85	0.00	-0.01	12.84	.76	.59	921	553.9	259.8	21.7
77.60	12.92	0.00	-0.01	12.90	.76	.59	921	553.9	259.3	22.2
77.80	13.45	0.00	-0.01	13.44	.74	.57	929	554.0	258.8	22.6
78.00	15.36	0.00	-0.01	15.34	.68	.51	951	554.0	258.3	23.1
78.20	18.15	0.00	-0.01	18.14	.60	.43	978	554.0	257.7	23.6
78.40	17.56	0.00	-0.01	17.54	.61	.45	973	554.0	257.2	24.0
78.60	16.56	0.00	-0.01	16.54	.64	.47	964	554.0	256.7	24.5
78.80	16.16	0.00	-0.01	16.15	.65	.48	959	554.0	256.2	25.0
79.00	15.75	0.00	-0.01	15.74	.67	.50	954	554.1	255.7	25.5
79.20	15.67	0.00	-0.01	15.66	.67	.50	955	554.1	255.2	25.9
79.40	16.18	0.00	-0.01	16.16	.65	.48	963	554.1	254.6	26.4
79.60	15.82	0.00	-0.01	15.81	.66	.49	959	554.1	254.1	26.9
79.80	15.19	0.00	-0.02	15.17	.68	.51	952	554.1	253.6	27.3
80.00	14.33	0.00	-0.02	14.31	.71	.53	942	554.1	253.0	27.8
80.20	13.75	0.00	-0.02	13.73	.72	.55	937	554.1	252.5	28.3
80.40	13.28	0.00	-0.02	13.26	.74	.57	934	554.2	252.0	28.7
80.60	13.02	0.00	-0.02	13.00	.75	.57	931	554.2	251.4	29.2
80.80	13.39	0.00	-0.02	13.38	.74	.56	935	554.2	250.9	29.7
81.00	13.75	0.00	-0.02	13.74	.72	.55	939	554.2	250.3	30.1
81.20	14.08	0.00	-0.02	14.07	.71	.54	943	554.2	249.8	30.6
81.40	13.98	0.00	-0.02	13.96	.71	.54	942	554.2	249.2	31.1
81.60	13.78	0.00	-0.02	13.76	.72	.55	941	554.2	248.7	31.5
81.80	13.88	0.00	-0.02	13.86	.72	.54	943	554.2	248.1	32.0
82.00	13.75	0.00	-0.02	13.73	.72	.55	942	554.2	247.6	32.5
82.20	13.67	0.00	-0.02	13.65	.72	.55	941	554.2	247.0	32.9
82.40	13.60	0.00	-0.02	13.58	.72	.55	941	554.2	246.4	33.4
82.60	13.99	0.00	-0.02	13.97	.71	.54	945	554.2	245.8	33.9
82.80	14.40	0.00	-0.02	14.38	.70	.52	949	554.2	245.3	34.3
83.00	14.73	0.00	-0.02	14.71	.69	.51	954	554.2	244.7	34.8
83.20	15.10	0.00	-0.02	15.08	.67	.50	960	554.2	244.1	35.3
83.40	23.37	0.00	-0.02	23.35	.47	.31	1034	554.2	243.5	35.7
83.60	37.83	0.00	-0.02	37.81	.26	.10	1128	554.2	242.9	36.2
83.80	41.09	0.00	-0.02	41.07	.22	.06	1145	554.2	242.3	36.6
84.00	26.59	0.00	-0.02	26.57	.41	.25	1059	554.2	241.7	37.1
84.20	13.37	0.00	-0.02	13.34	.72	.55	946	554.2	241.0	37.6
84.40	13.36	0.00	-0.02	13.34	.72	.55	945	554.2	240.4	38.0
84.60	14.99	0.00	-0.02	14.97	.67	.50	961	554.2	239.8	38.5
84.80	16.54	0.00	-0.02	16.52	.63	.46	975	554.2	239.1	39.0
85.00	18.39	0.00	-0.02	18.37	.59	.41	992	554.1	238.5	39.4
85.20	19.74	0.00	-0.02	19.72	.55	.38	1006	554.1	237.8	39.9
85.40	20.02	0.00	-0.02	19.99	.54	.38	1010	554.1	237.2	40.4
85.60	20.73	0.00	-0.02	20.71	.52	.36	1017	554.1	236.5	40.8

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
39985.80	20.79	0.00	-0.02	20.76	-15.52	-15.36	1017	554.0	235.8	41.3
86.00	22.04	0.00	-0.02	22.02	.49	.33	1028	554.0	235.1	41.7
86.20	21.42	0.00	-0.02	21.39	.51	.35	1022	554.0	234.4	42.2
86.40	20.09	0.00	-0.02	20.06	.54	.37	1011	553.9	233.7	42.7
86.60	18.94	0.00	-0.03	18.92	.57	.40	1001	553.9	233.0	43.1
86.80	18.25	0.00	-0.03	18.22	.58	.42	995	553.9	232.3	43.6
87.00	18.18	0.00	-0.03	18.15	.58	.42	996	553.8	231.5	44.0
87.20	18.72	0.00	-0.03	18.69	.57	.40	1002	553.8	230.8	44.5
87.40	21.33	0.00	-0.03	21.30	.51	.35	1025	553.7	230.0	45.0
87.60	22.63	0.00	-0.03	22.60	.48	.32	1035	553.7	229.2	45.4
87.80	20.22	0.00	-0.03	20.19	.53	.37	1016	553.6	228.5	45.9
88.00	18.85	0.00	-0.03	18.83	.56	.40	1004	553.6	227.6	46.3
88.20	19.28	0.00	-0.03	19.25	.55	.39	1009	553.5	226.8	46.8
88.40	21.12	0.00	-0.03	21.09	.50	.35	1026	553.4	226.0	47.2
88.60	20.58	0.00	-0.03	20.55	.52	.36	1021	553.4	225.1	47.7
88.80	19.22	0.00	-0.03	19.19	.55	.39	1008	553.3	224.2	48.1
89.00	17.64	0.00	-0.03	17.61	.59	.43	994	553.2	223.3	48.6
89.20	17.36	0.00	-0.03	17.34	.59	.44	993	553.2	222.4	49.0
89.40	17.85	0.00	-0.03	17.82	.58	.43	997	553.1	221.5	49.5
89.60	17.71	0.00	-0.03	17.68	.59	.43	995	553.0	220.5	49.9
89.80	17.58	-0.01	-0.03	17.54	.59	.43	995	552.9	219.5	50.3
90.00	17.43	-0.04	-0.03	17.36	.59	.44	993	552.8	218.5	50.8
90.20	17.69	-0.07	-0.03	17.59	.59	.43	996	552.8	217.4	51.2
90.40	17.51	-0.10	-0.03	17.38	.59	.44	994	552.7	216.4	51.6
90.60	17.01	-0.12	-0.03	16.86	.60	.45	989	552.6	215.2	52.1
90.80	16.67	-0.15	-0.03	16.49	.61	.46	985	552.5	214.1	52.5
91.00	17.25	-0.16	-0.03	17.06	.60	.45	991	552.4	212.9	52.9
91.20	18.22	-0.18	-0.03	18.01	.57	.42	1000	552.2	211.7	53.3
91.40	18.93	-0.20	-0.03	18.70	.56	.41	1007	552.1	210.4	53.8
91.60	19.36	-0.22	-0.03	19.11	.55	.40	1011	552.0	209.1	54.2
91.80	18.82	-0.23	-0.03	18.56	.56	.41	1005	551.9	207.7	54.6
92.00	18.55	-0.24	-0.03	18.28	.57	.42	1003	551.8	206.3	55.0
92.20	18.85	-0.25	-0.03	18.57	.56	.41	1007	551.7	204.8	55.4
92.40	21.04	-0.26	-0.03	20.74	.51	.36	1026	551.5	203.3	55.8
92.60	22.85	-0.27	-0.03	22.54	.47	.33	1040	551.4	201.6	56.2
92.80	22.82	-0.28	-0.03	22.51	.47	.33	1041	551.3	200.0	56.5
93.00	22.52	-0.29	-0.03	22.20	.48	.34	1038	551.2	198.2	56.9
93.20	22.45	-0.30	-0.03	22.13	.48	.34	1037	551.0	196.3	57.3
93.40	22.35	-0.30	-0.03	22.02	.48	.34	1036	550.9	194.4	57.6
93.60	22.81	-0.31	-0.03	22.47	.47	.33	1041	550.8	192.4	58.0
93.80	24.06	-0.32	-0.03	23.72	.44	.31	1051	550.6	190.3	58.3
94.00	25.27	-0.32	-0.03	24.92	.42	.29	1062	550.5	188.0	58.6
94.20	25.95	-0.32	-0.03	25.59	.41	.28	1067	550.3	185.7	58.9
94.40	22.96	-0.33	-0.03	22.60	.46	.33	1044	550.2	183.2	59.2
94.60	24.59	-0.33	-0.03	24.23	.43	.30	1056	550.0	180.6	59.5
94.80	26.52	-0.34	-0.03	26.15	.39	.27	1072	549.9	177.9	59.8
95.00	25.99	-0.34	-0.03	25.62	.40	.28	1069	549.7	175.0	60.0
95.20	25.10	-0.34	-0.03	24.73	.42	.30	1062	549.6	172.0	60.3
95.40	26.07	-0.35	-0.03	25.70	.40	.28	1068	549.4	168.9	60.5
95.60	27.42	-0.35	-0.03	27.03	.38	.26	1078	549.2	165.6	60.7
95.80	28.48	-0.35	-0.03	28.10	.36	.24	1086	549.1	162.2	60.8
96.00	29.34	-0.36	-0.03	28.95	.35	.23	1093	548.9	158.7	60.9
96.20	31.52	-0.36	-0.03	31.13	.31	.20	1108	548.7	155.1	61.0
96.40	33.37	-0.36	-0.03	32.98	.29	.18	1120	548.6	151.4	61.1
96.60	34.17	-0.37	-0.03	33.78	.28	.17	1124	548.4	147.6	61.2
96.80	31.07	-0.37	-0.03	30.68	.32	.21	1105	548.2	143.8	61.2
97.00	30.80	-0.37	-0.03	30.40	.32	.21	1103	548.0	139.9	61.2

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40026.40	36.96	0.10	0.05	37.11	-15.25	-15.27	1115	527.1	352.2	-12.5
26.60	36.68	0.11	0.05	36.84	.25	.27	1114	527.1	351.7	-13.1
26.80	36.52	0.11	0.05	36.69	.26	.28	1113	527.1	351.2	-13.6
27.00	36.55	0.12	0.05	36.72	.26	.27	1113	527.0	350.8	-14.2
27.20	37.01	0.12	0.05	37.19	.25	.27	1116	527.0	350.3	-14.7
27.40	36.22	0.13	0.05	36.40	.26	.28	1112	526.9	349.8	-15.3
27.60	33.20	0.13	0.05	33.38	.30	.32	1093	526.9	349.3	-15.9
27.80	31.03	0.13	0.05	31.22	.33	.35	1079	526.9	348.8	-16.4
28.00	30.95	0.14	0.06	31.15	.33	.35	1079	526.8	348.3	-17.0
28.20	31.23	0.14	0.06	31.43	.32	.35	1081	526.8	347.8	-17.5
28.40	30.84	0.14	0.06	31.04	.33	.35	1079	526.8	347.3	-18.1
28.60	30.01	0.15	0.06	30.21	.34	.36	1073	526.8	346.8	-18.7
28.80	28.56	0.15	0.06	28.77	.36	.39	1063	526.8	346.3	-19.2
29.00	28.90	0.16	0.06	29.11	.36	.38	1066	526.8	345.8	-19.8
29.20	31.75	0.16	0.06	31.97	.32	.34	1085	526.8	345.4	-20.4
29.40	33.60	0.16	0.06	33.82	.29	.31	1098	526.8	344.9	-20.9
29.60	33.53	0.17	0.06	33.76	.29	.31	1098	526.8	344.4	-21.5
29.80	32.98	0.17	0.06	33.21	.30	.32	1095	526.8	343.9	-22.1
30.00	33.33	0.18	0.06	33.57	.29	.32	1097	526.8	343.4	-22.6
30.20	33.35	0.18	0.06	33.60	.30	.32	1097	526.8	342.9	-23.2
30.40	33.02	0.19	0.06	33.27	.30	.32	1095	526.8	342.4	-23.7
30.60	31.82	0.19	0.06	32.07	.32	.34	1088	526.8	341.9	-24.3
30.80	30.74	0.20	0.06	31.00	.33	.35	1081	526.8	341.4	-24.9
31.00	29.62	0.20	0.06	29.89	.35	.37	1073	526.9	340.9	-25.4
31.20	29.29	0.20	0.06	29.55	.35	.37	1071	526.9	340.4	-26.0
31.40	29.03	0.21	0.06	29.30	.36	.38	1069	526.9	339.9	-26.6
31.60	27.89	0.21	0.06	28.16	.38	.40	1061	527.0	339.5	-27.1
31.80	27.17	0.21	0.06	27.45	.39	.41	1056	527.0	339.0	-27.7
32.00	26.23	0.22	0.06	26.51	.40	.42	1050	527.1	338.5	-28.2
32.20	26.29	0.22	0.06	26.57	.40	.42	1051	527.1	338.0	-28.8
32.40	26.48	0.23	0.06	26.77	.40	.42	1052	527.2	337.5	-29.4
32.60	26.22	0.23	0.06	26.51	.41	.43	1050	527.2	337.0	-29.9
32.80	25.76	0.23	0.06	26.06	.41	.43	1047	527.3	336.5	-30.5
33.00	25.55	0.24	0.06	25.86	.42	.43	1046	527.4	336.0	-31.1
33.20	26.37	0.24	0.06	26.68	.40	.42	1053	527.4	335.5	-31.6
33.40	27.02	0.24	0.06	27.33	.39	.41	1058	527.5	335.0	-32.2
33.60	27.69	0.25	0.06	28.01	.38	.40	1063	527.6	334.5	-32.7
33.80	28.00	0.25	0.06	28.31	.38	.39	1065	527.7	334.0	-33.3
34.00	27.79	0.25	0.06	28.11	.38	.40	1064	527.7	333.5	-33.9
34.20	26.84	0.26	0.07	27.17	.40	.41	1057	527.8	333.0	-34.4
34.40	26.48	0.26	0.07	26.80	.40	.42	1054	527.9	332.5	-35.0
34.60	26.47	0.26	0.07	26.80	.41	.42	1055	528.0	332.1	-35.6
34.80	26.50	0.27	0.07	26.84	.40	.42	1055	528.1	331.6	-36.1
35.00	25.92	0.27	0.07	26.26	.41	.43	1051	528.2	331.1	-36.7
35.20	24.62	0.27	0.07	24.96	.44	.45	1042	528.4	330.6	-37.2
35.40	22.83	0.28	0.07	23.17	.47	.48	1027	528.5	330.1	-37.8
35.60	22.06	0.28	0.07	22.41	.49	.50	1020	528.6	329.6	-38.4
35.80	21.92	0.28	0.07	22.27	.49	.50	1020	528.7	329.1	-38.9
36.00	21.80	0.29	0.07	22.15	.50	.50	1019	528.9	328.6	-39.5
36.20	21.53	0.29	0.07	21.88	.50	.51	1017	529.0	328.1	-40.1
36.40	21.29	0.29	0.07	21.65	.51	.51	1015	529.2	327.6	-40.6
36.60	20.87	0.29	0.07	21.23	.52	.52	1011	529.3	327.1	-41.2
36.80	20.91	0.30	0.07	21.28	.52	.52	1012	529.5	326.6	-41.7
37.00	25.18	0.30	0.07	25.55	.43	.44	1048	529.6	326.1	-42.3
37.20	24.92	0.30	0.07	25.29	.44	.44	1047	529.8	325.6	-42.9
37.40	22.78	0.30	0.07	23.15	.48	.48	1030	529.9	325.1	-43.4
37.60	21.95	0.31	0.07	22.32	.50	.50	1022	530.1	324.5	-44.0
37.80	21.66	0.31	0.07	22.03	.51	.51	1019	530.3	324.0	-44.5
38.00	22.32	0.31	0.07	22.70	.49	.49	1026	530.5	323.5	-45.1
38.20	21.55	0.31	0.07	21.93	.51	.50	1020	530.6	323.0	-45.7

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40038.40	21.09	0.31	0.07	21.47	-15.52	-15.51	1017	530.8	322.5	-46.2
38.60	19.62	0.32	0.07	20.00	.55	.54	1004	531.0	322.0	-46.8
38.80	18.15	0.32	0.07	18.53	.59	.58	990	531.2	321.5	-47.3
39.00	17.11	0.32	0.07	17.49	.62	.61	980	531.4	321.0	-47.9
39.20	16.69	0.32	0.07	17.08	.62	.61	977	531.6	320.5	-48.5
39.40	16.28	0.32	0.07	16.67	.64	.62	973	531.8	320.0	-49.0
39.60	15.75	0.32	0.07	16.14	.65	.64	967	532.0	319.5	-49.6
39.80	15.21	0.33	0.07	15.60	.67	.65	962	532.2	318.9	-50.1
40.00	14.72	0.33	0.07	15.11	.68	.67	957	532.4	318.4	-50.7
40.20	14.40	0.33	0.06	14.79	.69	.67	955	532.6	317.9	-51.3
40.40	14.71	0.33	0.06	15.11	.68	.66	959	532.9	317.4	-51.8
40.60	14.61	0.33	0.06	15.01	.68	.66	959	533.1	316.9	-52.4
40.80	13.62	0.34	0.06	14.02	.72	.69	948	533.3	316.3	-52.9
41.00	13.04	0.34	0.06	13.44	.74	.71	940	533.5	315.8	-53.5
41.20	13.11	0.34	0.06	13.52	.74	.71	940	533.8	315.3	-54.1
41.40	12.77	0.34	0.06	13.18	.75	.72	937	534.0	314.8	-54.6
41.60	12.77	0.34	0.06	13.18	.75	.72	939	534.2	314.2	-55.2
41.80	12.58	0.34	0.06	12.99	.76	.72	936	534.5	313.7	-55.7
42.00	12.19	0.34	0.06	12.59	.77	.74	932	534.7	313.2	-56.3
42.20	11.45	0.34	0.06	11.86	.80	.76	923	535.0	312.7	-56.8
42.40	10.97	0.34	0.06	11.38	.82	.78	917	535.2	312.1	-57.4
42.60	10.43	0.34	0.06	10.84	.84	.80	910	535.5	311.6	-58.0
42.80	10.14	0.34	0.06	10.55	.85	.81	907	535.7	311.0	-58.5
43.00	10.07	0.34	0.06	10.48	.86	.81	906	536.0	310.5	-59.1
43.20	9.93	0.34	0.06	10.34	.86	.82	904	536.2	310.0	-59.6
43.40	9.87	0.34	0.06	10.28	.87	.82	904	536.5	309.4	-60.2
43.60	9.69	0.34	0.06	10.10	.87	.82	902	536.7	308.9	-60.7
43.80	9.52	0.35	0.06	9.93	.88	.83	900	537.0	308.3	-61.3
44.00	9.19	0.35	0.06	9.60	.90	.84	895	537.2	307.8	-61.9
44.20	8.69	0.35	0.06	9.10	.92	.87	887	537.5	307.2	-62.4
44.40	8.55	0.35	0.06	8.96	.93	.87	886	537.7	306.7	-63.0
44.60	8.45	0.34	0.06	8.86	.93	.87	886	538.0	306.1	-63.5
44.80	8.34	0.34	0.06	8.74	.94	.88	885	538.3	305.5	-64.1
45.00	8.09	0.34	0.06	8.50	.95	.89	881	538.5	305.0	-64.6
45.20	7.93	0.34	0.06	8.33	.96	.89	878	538.8	304.4	-65.2
45.40	7.88	0.34	0.06	8.28	.96	.89	879	539.1	303.8	-65.7
45.60	7.95	0.34	0.06	8.35	.95	.89	881	539.3	303.3	-66.3
45.80	7.97	0.34	0.06	8.37	.95	.88	882	539.6	302.7	-66.9
46.00	7.72	0.34	0.06	8.12	.97	.90	878	539.8	302.1	-67.4
46.20	7.41	0.34	0.06	7.81	.99	.91	873	540.1	301.5	-68.0
46.40	7.36	0.34	0.06	7.76	.99	.91	873	540.4	300.9	-68.5
46.60	7.20	0.34	0.06	7.60	-16.00	.92	871	540.6	300.4	-69.1
46.80	7.71	0.34	0.06	8.11	-15.97	.89	881	540.9	299.8	-69.6
47.00	8.16	0.34	0.06	8.55	.94	.86	889	541.2	299.2	-70.2
47.20	9.38	0.34	0.06	9.77	.88	.80	911	541.4	298.6	-70.7
47.40	11.55	0.34	0.06	11.94	.79	.71	945	541.7	297.9	-71.3
47.60	11.07	0.33	0.05	11.46	.80	.72	939	542.0	297.3	-71.8
47.80	10.47	0.33	0.05	10.86	.83	.74	932	542.2	296.7	-72.4
48.00	11.41	0.33	0.05	11.79	.79	.71	945	542.5	296.1	-72.9
48.20	14.12	0.33	0.05	14.51	.70	.61	980	542.7	295.5	-73.5
48.40	11.94	0.33	0.05	12.32	.77	.68	953	543.0	294.8	-74.0
48.60	8.73	0.32	0.05	9.11	.91	.82	905	543.3	294.2	-74.6
48.80	7.71	0.32	0.05	8.09	.96	.87	887	543.5	293.5	-75.1
49.00	8.70	0.32	0.05	9.07	.91	.81	906	543.8	292.9	-75.7
49.20	8.24	0.32	0.05	8.61	.93	.83	900	544.0	292.2	-76.2
49.40	7.77	0.32	0.05	8.14	.96	.86	892	544.3	291.5	-76.8
49.60	8.27	0.31	0.05	8.64	.93	.83	900	544.5	290.9	-77.3
49.80	8.39	0.31	0.05	8.75	.93	.82	902	544.8	290.2	-77.9
50.00	7.87	0.31	0.05	8.23	.95	.85	894	545.0	289.5	-78.4
50.20	7.19	0.31	0.05	7.55	.99	.88	883	545.3	288.8	-79.0

Table 3 (cont.)

1964 76A (Explorer 24)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_O$ (deg)	$\delta_\pi - \delta_O$ (deg)
40050.40	7.72	0.30	0.05	8.07	-15.96	-15.85	893	545.5	288.1	-79.5
50.60	8.11	0.30	0.05	8.46	.94	.83	900	545.8	287.3	-80.1
40070.80	11.27	-0.13	-0.02	11.11	-15.85	-15.72	942	547.9	95.8	-75.9
71.00	12.78	-0.14	-0.03	12.61	.79	.67	961	547.6	95.1	-75.3
71.20	14.63	-0.14	-0.03	14.46	.73	.61	984	547.3	94.4	-74.6
71.40	17.26	-0.14	-0.03	17.09	.65	.54	1014	546.9	93.7	-74.0
71.60	16.32	-0.15	-0.03	16.15	.67	.56	1004	546.6	93.0	-73.4
71.80	16.06	-0.15	-0.03	15.88	.68	.57	1000	546.3	92.4	-72.7
72.00	16.75	-0.15	-0.03	16.58	.66	.55	1007	545.9	91.7	-72.1
72.20	17.15	-0.15	-0.03	16.97	.65	.55	1010	545.6	91.0	-71.5
72.40	17.04	-0.16	-0.03	16.85	.65	.55	1009	545.2	90.4	-70.8
72.60	14.59	-0.16	-0.03	14.40	.72	.62	981	544.9	89.7	-70.2
72.80	14.79	-0.16	-0.03	14.60	.72	.62	981	544.5	89.1	-69.6
73.00	15.38	-0.16	-0.03	15.19	.70	.60	987	544.1	88.5	-68.9
40075.20	22.00	-0.19	-0.04	21.78	-15.52	-15.46	1048	539.3	81.9	-62.0
75.40	23.40	-0.19	-0.04	23.18	.49	.43	1060	538.8	81.3	-61.3
75.60	23.14	-0.19	-0.04	22.91	.49	.44	1057	538.4	80.7	-60.7
75.80	20.30	-0.20	-0.04	20.06	.55	.50	1031	537.8	80.2	-60.1
76.00	20.68	-0.20	-0.04	20.45	.54	.49	1033	537.3	79.6	-59.4
76.20	22.60	-0.20	-0.04	22.37	.50	.45	1050	536.8	79.0	-58.8
76.40	25.17	-0.20	-0.04	24.93	.45	.41	1071	536.3	78.5	-58.2
76.60	23.30	-0.20	-0.04	23.06	.48	.44	1054	535.7	77.9	-57.5
76.80	22.22	-0.21	-0.04	21.97	.50	.47	1043	535.2	77.4	-56.9
77.00	23.01	-0.21	-0.04	22.76	.48	.45	1049	534.6	76.8	-56.3
77.20	23.63	-0.21	-0.04	23.38	.47	.44	1054	534.0	76.3	-55.7

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_n$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_0$ (deg)	$\delta_\pi - \delta_0$ (deg)
40084.50	3.17	0.15	-0.02	3.30	-16.22	-16.54	1225	732.4	351.8	8.3
85.00	2.93	0.16	-0.01	3.07	.26	.57	1212	733.8	350.7	9.5
85.50	2.83	0.18	-0.01	3.00	.27	.58	1208	735.1	349.7	10.6
86.00	2.36	0.20	-0.01	2.55	.36	.66	1177	736.4	348.6	11.7
86.50	2.13	0.22	-0.01	2.34	.40	.71	1159	737.7	347.6	12.9
87.00	1.96	0.24	0.00	2.19	.44	.74	1147	739.0	346.6	14.0
87.50	1.80	0.25	0.00	2.05	.48	.78	1134	740.2	345.5	15.2
88.00	1.65	0.27	0.00	1.92	.52	.81	1120	741.5	344.5	16.3
88.50	1.54	0.29	0.00	1.83	.56	.84	1111	742.7	343.4	17.4
89.00	1.52	0.31	0.01	1.83	.56	.84	1109	743.9	342.4	18.6
89.50	1.48	0.33	0.01	1.81	.58	.85	1106	745.0	341.3	19.7
90.00	1.45	0.34	0.01	1.81	.59	.85	1104	746.2	340.2	20.9
90.50	1.43	0.36	0.02	1.81	.59	.85	1103	747.3	339.2	22.0
91.00	1.47	0.37	0.02	1.87	.58	.83	1110	748.5	338.1	23.1
91.50	1.50	0.40	0.02	1.92	.57	.82	1114	749.6	337.0	24.3
92.00	1.64	0.41	0.02	2.07	.54	.78	1125	750.7	335.9	25.4
92.50	1.55	0.42	0.03	1.99	.56	.80	1119	751.8	334.8	26.6
93.00	1.19	0.44	0.03	1.66	.66	.89	1086	752.8	333.7	27.7
93.50	1.01	0.45	0.03	1.49	.73	.95	1064	753.9	332.6	28.9
94.00	0.96	0.46	0.03	1.46	.74	.96	1059	754.9	331.5	30.0
94.50	0.82	0.48	0.04	1.33	.79	.99	1045	755.9	330.4	31.2
95.00	0.65	0.49	0.04	1.18	.84	-17.05	1027	756.9	329.3	32.3
95.50	0.60	0.50	0.04	1.14	.87	.06	1020	757.9	328.1	33.4
96.00	0.58	0.51	0.04	1.14	.87	.06	1019	758.8	327.0	34.6
96.50	0.52	0.52	0.04	1.08	.90	.08	1010	759.8	325.8	35.7
97.00	0.46	0.53	0.05	1.04	.92	.10	1004	760.7	324.7	36.9
97.50	0.48	0.54	0.05	1.07	.91	.08	1007	761.6	323.5	38.0
98.00	0.57	0.55	0.05	1.16	.88	.05	1019	762.5	322.3	39.2
98.50	0.65	0.56	0.05	1.26	.85	.01	1031	763.3	321.1	40.3
99.00	0.75	0.57	0.05	1.36	.81	-16.97	1043	764.2	319.9	41.5
99.50	0.90	0.57	0.05	1.52	.76	.92	1063	765.0	318.6	42.6
40100.00	1.16	0.58	0.05	1.79	.68	.84	1089	765.9	317.4	43.8
00.50	1.31	0.58	0.06	1.95	.65	.80	1101	766.7	316.1	44.9
01.00	0.99	0.58	0.06	1.63	.73	.88	1071	767.4	314.8	46.0
01.50	0.93	0.59	0.06	1.58	.75	.89	1067	768.2	313.5	47.2
02.00	0.88	0.59	0.06	1.53	.75	.90	1064	768.9	312.2	48.3
02.50	0.81	0.59	0.06	1.46	.77	.91	1058	769.7	310.8	49.5
03.00	0.84	0.59	0.06	1.50	.76	.90	1064	770.4	309.4	50.6
03.50	0.91	0.59	0.06	1.56	.74	.87	1070	771.1	308.0	51.7
04.00	0.94	0.59	0.06	1.60	.73	.86	1072	771.7	306.6	52.9
04.50	0.93	0.59	0.06	1.58	.74	.87	1070	772.4	305.1	54.0
05.00	0.94	0.59	0.07	1.59	.73	.86	1071	773.0	303.5	55.1
05.50	0.98	0.58	0.07	1.62	.73	.85	1073	773.6	302.0	56.3
06.00	1.10	0.58	0.07	1.74	.70	.82	1084	774.2	300.4	57.4
06.50	1.16	0.57	0.07	1.80	.68	.80	1088	774.8	298.7	58.5
40107.00	1.78	0.56	0.07	2.41	-16.56	-16.67	1134	775.3	296.9	59.6
07.20	2.81	0.56	0.07	3.43	.39	.51	1197	775.6	296.2	60.0
07.40	2.66	0.55	0.07	3.28	.40	.52	1193	775.8	295.5	60.5
07.60	2.17	0.55	0.07	2.78	.47	.59	1165	776.0	294.8	60.9
07.80	2.01	0.55	0.07	2.62	.50	.62	1154	776.2	294.0	61.4
08.00	2.03	0.54	0.07	2.64	.51	.62	1153	776.4	293.3	61.8
08.20	1.37	0.54	0.07	1.97	.64	.75	1103	776.6	292.5	62.3
40108.50	0.95	0.53	0.07	1.55	-16.74	-16.85	1065	776.9	291.3	62.9
09.00	0.96	0.51	0.07	1.54	.75	.85	1063	777.3	289.3	64.0
09.50	0.99	0.50	0.07	1.55	.75	.85	1062	777.8	287.1	65.1
10.00	1.07	0.48	0.07	1.62	.73	.83	1068	778.2	284.9	66.1
10.50	1.18	0.46	0.07	1.71	.71	.81	1075	778.6	282.5	67.2
11.00	1.34	0.45	0.07	1.85	.68	.77	1086	779.0	279.9	68.3

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_O$ (deg)	$\delta_\pi - \delta_O$ (deg)
40111.50	1.49	0.42	0.06	1.97	-16.64	-16.74	1098	779.3	277.2	69.3
12.00	1.88	0.39	0.06	2.34	.55	.65	1130	779.7	274.3	70.3
12.50	2.08	0.36	0.06	2.51	.52	.61	1142	780.0	271.2	71.3
13.00	2.06	0.33	0.06	2.46	.53	.62	1138	780.2	267.8	72.2
13.50	1.99	0.29	0.06	2.34	.55	.64	1128	780.5	264.1	73.2
14.00	1.66	0.25	0.06	1.97	.63	.72	1099	780.8	260.2	74.1
14.50	1.58	0.20	0.06	1.83	.66	.75	1086	781.0	255.9	74.9
15.00	1.53	0.14	0.06	1.73	.69	.78	1075	781.2	251.2	75.7
15.50	1.38	0.06	0.06	1.51	.76	.84	1049	781.3	246.0	76.5
16.00	1.35	0.00	0.06	1.41	.80	.88	1036	781.5	240.5	77.2
16.50	1.29	0.00	0.06	1.35	.82	.89	1027	781.6	234.5	77.8
17.00	1.16	0.00	0.05	1.21	.87	.94	1008	781.7	228.2	78.3
17.50	1.05	0.00	0.05	1.10	.91	.98	992	781.8	221.5	78.8
18.00	1.27	0.00	0.05	1.32	.83	.90	1020	781.8	214.6	79.1
18.50	1.59	0.00	0.05	1.64	.73	.81	1054	781.8	207.5	79.3
19.00	1.19	0.00	0.05	1.24	.85	.93	1008	781.8	200.5	79.4
19.50	1.01	0.00	0.05	1.06	.92	-17.00	981	781.8	193.7	79.4
20.00	0.99	0.00	0.04	1.04	.93	.00	977	781.8	187.1	79.4
20.50	1.11	0.00	0.04	1.15	.88	-16.96	993	781.7	180.9	79.2
21.00	1.20	0.00	0.04	1.24	.85	.92	1004	781.6	175.1	78.9
21.50	1.32	0.00	0.04	1.36	.81	.88	1017	781.5	169.8	78.6
22.00	1.39	0.00	0.04	1.42	.78	.86	1024	781.4	164.8	78.2
22.50	1.56	0.00	0.03	1.60	.72	.81	1043	781.2	160.3	77.7
23.00	1.39	0.00	0.03	1.42	.78	.86	1020	781.0	156.1	77.2
23.50	1.00	0.00	0.03	1.04	.93	-17.00	966	780.8	152.3	76.7
24.00	0.92	0.00	0.03	.94	.97	.04	948	780.6	148.8	76.1
24.50	0.99	0.00	0.03	1.02	.93	.01	960	780.3	145.5	75.5
25.00	1.15	0.00	0.02	1.17	.87	-16.95	982	780.1	142.5	74.9
25.50	1.22	0.00	0.02	1.24	.83	.92	992	779.8	139.6	74.3
26.00	1.22	0.00	0.02	1.24	.83	.92	990	779.5	137.0	73.6
26.50	1.19	0.00	0.02	1.21	.84	.93	984	779.1	134.5	73.0
27.00	1.24	0.00	0.02	1.26	.82	.91	989	778.8	132.2	72.3
27.50	1.43	0.00	0.01	1.45	.76	.85	1012	778.4	130.0	71.6
28.00	1.60	0.00	0.01	1.61	.70	.80	1029	778.0	127.9	70.9
28.50	1.62	0.00	0.01	1.63	.70	.80	1028	777.6	125.8	70.1
29.00	1.63	0.00	0.01	1.64	.70	.80	1026	777.2	123.9	69.4
29.50	1.66	0.00	0.01	1.67	.69	.79	1027	776.7	122.1	68.7
30.00	2.02	0.00	0.00	2.02	.60	.71	1057	776.3	120.3	67.9
30.50	2.10	0.00	0.00	2.11	.58	.69	1063	775.8	118.6	67.2
40130.80	2.23	0.00	0.00	2.23	-16.56	-16.67	1069	775.5	117.6	66.7
31.00	2.41	0.00	0.00	2.41	.53	.64	1081	775.3	117.0	66.4
31.20	2.93	0.00	0.00	2.93	.44	.55	1115	775.1	116.3	66.1
31.40	3.11	0.00	0.00	3.11	.40	.51	1128	774.9	115.7	65.8
31.60	2.79	0.00	0.00	2.78	.44	.56	1110	774.7	115.0	65.5
31.80	1.96	0.00	0.00	1.96	.60	.71	1052	774.5	114.4	65.2
32.00	2.48	0.00	-0.01	2.47	.51	.62	1086	774.3	113.8	64.9
32.20	3.00	0.00	-0.01	2.99	.42	.54	1116	774.1	113.2	64.6
32.40	2.68	0.00	-0.01	2.67	.46	.58	1100	773.8	112.6	64.3
32.60	2.53	0.00	-0.01	2.52	.49	.61	1089	773.6	112.0	64.0
40133.00	1.70	0.00	-0.01	1.69	-16.68	-16.80	1016	773.2	110.8	63.4
33.50	1.49	0.00	-0.01	1.48	.74	.86	991	772.6	109.4	62.6
34.00	1.59	0.00	-0.01	1.57	.72	.83	1000	772.0	108.0	61.8
34.50	1.68	0.00	-0.02	1.67	.69	.80	1008	771.5	106.6	61.1
35.00	1.75	0.00	-0.02	1.73	.67	.79	1013	770.9	105.2	60.3
35.50	1.79	0.00	-0.02	1.77	.65	.78	1016	770.3	103.9	59.5
36.00	1.84	0.00	-0.02	1.81	.64	.77	1021	769.7	102.6	58.7
36.50	1.91	0.00	-0.03	1.88	.62	.75	1025	769.0	101.3	57.9
37.00	2.46	0.00	-0.03	2.43	.50	.64	1067	768.4	100.0	57.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40137.50	2.24	0.00	-0.03	2.21	-16.54	-16.68	1050	767.8	98.8	56.4
38.00	2.10	0.00	-0.03	2.06	.57	.72	1036	767.1	97.6	55.6
38.50	2.12	0.00	-0.04	2.08	.57	.71	1037	766.5	96.3	54.8
39.00	2.08	0.00	-0.04	2.05	.57	.72	1032	765.8	95.1	54.0
39.50	2.13	0.00	-0.04	2.09	.56	.71	1034	765.2	94.0	53.2
40.00	2.04	0.00	-0.04	2.00	.59	.74	1023	764.5	92.8	52.4
40.50	2.17	0.00	-0.04	2.13	.56	.71	1032	763.9	91.6	51.6
41.00	2.30	0.00	-0.05	2.26	.52	.68	1043	763.2	90.5	50.8
40141.40	2.98	0.00	-0.05	2.93	-16.39	-16.56	1091	762.7	89.5	50.2
41.60	3.67	0.00	-0.05	3.62	.29	.46	1128	762.4	89.1	49.8
41.80	4.36	0.00	-0.05	4.31	.22	.39	1157	762.1	88.6	49.5
42.00	4.38	0.00	-0.05	4.33	.21	.38	1159	761.9	88.2	49.2
42.20	4.74	0.00	-0.05	4.69	.17	.35	1173	761.6	87.7	48.9
42.40	3.58	0.00	-0.05	3.53	.30	.48	1122	761.3	87.3	48.6
42.60	3.10	0.00	-0.05	3.04	.37	.54	1097	761.1	86.8	48.2
40142.75	2.99	0.00	-0.05	2.93	-16.38	-16.56	1089	760.9	86.5	48.0
43.00	2.68	0.00	-0.05	2.63	.43	.61	1070	760.5	85.9	47.6
40143.50	2.46	0.00	-0.06	2.41	-16.48	-16.66	1053	759.9	84.8	46.8
44.00	2.41	0.00	-0.06	2.36	.49	.67	1047	759.2	83.7	46.0
44.50	2.60	0.00	-0.06	2.54	.46	.64	1057	758.6	82.6	45.2
45.00	2.60	0.00	-0.06	2.54	.46	.64	1055	757.9	81.5	44.4
45.50	2.72	0.00	-0.06	2.66	.43	.62	1063	757.3	80.4	43.6
46.00	2.90	0.00	-0.06	2.83	.40	.59	1075	756.6	79.3	42.8
46.50	3.54	0.00	-0.06	3.47	.30	.50	1108	756.0	78.2	42.0
47.00	3.72	0.00	-0.07	3.66	.27	.48	1118	755.3	77.2	41.2
47.50	4.07	0.00	-0.07	4.00	.23	.44	1133	754.7	76.1	40.4
48.00	3.88	0.00	-0.07	3.81	.25	.46	1124	754.1	75.0	39.6
48.50	3.87	0.00	-0.07	3.80	.25	.46	1124	753.5	74.0	38.7
49.00	4.33	0.00	-0.07	4.26	.19	.40	1146	752.9	72.9	37.9
49.50	4.68	0.00	-0.07	4.61	.15	.37	1160	752.3	71.8	37.1
50.00	4.40	0.00	-0.07	4.33	.18	.40	1147	751.7	70.8	36.3
50.50	4.48	0.00	-0.07	4.41	.17	.40	1148	751.2	69.7	35.5
51.00	4.69	0.00	-0.07	4.62	.15	.37	1157	750.6	68.7	34.7
51.50	4.71	0.00	-0.07	4.64	.14	.37	1158	750.1	67.6	33.9
52.00	4.79	0.00	-0.07	4.72	.13	.36	1162	749.5	66.6	33.1
52.50	5.23	0.00	-0.07	5.15	.09	.32	1178	749.0	65.6	32.2
53.00	5.58	0.00	-0.07	5.51	.05	.29	1191	748.5	64.5	31.4
40153.25	5.86	0.00	-0.07	5.78	-16.03	-16.27	1201	748.3	64.0	31.0
53.50	6.42	0.00	-0.07	6.35	-15.99	.23	1217	748.0	63.5	30.6
53.75	6.67	0.00	-0.07	6.60	.96	.21	1226	747.8	63.0	30.2
54.00	7.67	0.00	-0.07	7.59	.90	.14	1254	747.5	62.4	29.8
54.25	6.83	0.00	-0.07	6.76	.95	.19	1232	747.3	61.9	29.4
54.50	6.75	0.00	-0.07	6.68	.95	.20	1230	747.1	61.4	29.0
54.75	6.24	0.00	-0.07	6.17	.98	.23	1216	746.9	60.9	28.6
40155.00	6.13	0.00	-0.07	6.06	-15.99	-16.24	1212	746.6	60.4	28.1
55.50	6.12	0.00	-0.07	6.05	.99	.24	1211	746.2	59.3	27.3
56.00	6.49	0.00	-0.07	6.42	.96	.21	1223	745.8	58.3	26.5
56.50	6.91	-0.05	-0.07	6.79	.93	.19	1235	745.4	57.3	25.7
57.00	7.07	-0.13	-0.07	6.87	.93	.19	1236	745.1	56.2	24.9
57.50	7.24	-0.18	-0.07	7.00	.92	.18	1239	744.7	55.2	24.0
58.00	7.50	-0.21	-0.07	7.22	.90	.16	1247	744.4	54.2	23.2
40158.25	7.88	-0.23	-0.07	7.58	-15.88	-16.13	1258	744.3	53.7	22.8
58.50	8.92	-0.24	-0.07	8.61	.82	.08	1284	744.1	53.1	22.4
58.75	9.09	-0.25	-0.07	8.78	.81	.06	1289	744.0	52.6	22.0

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40159.00	10.55	-0.26	-0.07	10.23	-15.73	-15.99	1323	743.8	52.1	21.6
59.25	9.75	-0.27	-0.07	9.41	.77	-16.03	1304	743.7	51.6	21.1
59.50	8.61	-0.27	-0.07	8.27	.83	.09	1277	743.6	51.1	20.7
59.75	8.55	-0.28	-0.06	8.20	.83	.09	1277	743.5	50.6	20.3
60.00	8.37	-0.28	-0.06	8.02	.84	.10	1273	743.4	50.0	19.9
60.25	7.64	-0.29	-0.06	7.29	.88	.14	1254	743.3	49.5	19.5
40160.40	8.56	-0.29	-0.06	8.21	-15.83	-16.08	1278	743.2	49.2	19.2
60.60	9.07	-0.29	-0.06	8.72	.80	.05	1291	743.1	48.8	18.9
60.80	13.10	-0.29	-0.06	12.75	.63	-15.87	1374	743.1	48.4	18.6
61.00	12.77	-0.29	-0.06	12.41	.64	.88	1368	743.0	48.0	18.2
61.20	10.08	-0.30	-0.06	9.72	.75	-16.00	1314	742.9	47.6	17.9
61.40	9.06	-0.30	-0.06	8.71	.80	.07	1289	742.9	47.2	17.6
61.60	9.88	-0.30	-0.06	9.53	.77	.03	1307	742.8	46.7	17.2
61.80	12.21	-0.30	-0.06	11.85	.66	-15.91	1357	742.8	46.3	16.9
62.00	12.85	-0.29	-0.06	12.50	.63	.88	1371	742.7	45.9	16.6
62.20	10.63	-0.29	-0.06	10.28	.72	.96	1329	742.7	45.5	16.2
62.40	8.08	-0.29	-0.06	7.72	.85	-16.09	1270	742.6	45.1	15.9
40162.50	8.02	-0.29	-0.06	7.67	-15.85	-16.11	1268	742.6	44.9	15.7
62.75	7.31	-0.29	-0.06	6.96	.90	.16	1247	742.6	44.4	15.3
63.00	7.55	-0.29	-0.06	7.20	.88	.15	1254	742.5	43.8	14.9
63.25	8.97	-0.29	-0.05	8.62	.80	.07	1290	742.5	43.3	14.5
63.50	7.69	-0.29	-0.05	7.35	.88	.14	1258	742.5	42.8	14.1
63.75	6.39	-0.29	-0.05	6.05	.96	.23	1221	742.5	42.3	13.6
64.00	5.95	-0.28	-0.05	5.62	-16.00	.27	1207	742.5	41.8	13.2
64.25	5.63	-0.28	-0.05	5.31	.02	.29	1196	742.5	41.3	12.8
64.50	6.18	-0.27	-0.05	5.85	-15.98	.25	1215	742.5	40.7	12.4
64.75	6.18	-0.27	-0.05	5.86	.98	.25	1216	742.5	40.2	12.0
65.00	6.62	-0.27	-0.05	6.31	.95	.22	1229	742.5	39.7	11.5
65.25	5.67	-0.26	-0.05	5.36	-16.02	.30	1198	742.5	39.2	11.1
65.50	5.15	-0.26	-0.05	4.85	.07	.35	1179	742.6	38.7	10.7
65.75	4.96	-0.25	-0.04	4.66	.09	.36	1172	742.6	38.1	10.3
66.00	4.66	-0.25	-0.04	4.36	.12	.39	1161	742.7	37.6	9.9
66.25	4.90	-0.24	-0.04	4.61	.10	.37	1170	742.7	37.1	9.4
66.50	5.03	-0.24	-0.04	4.75	.09	.36	1175	742.8	36.6	9.0
66.75	5.06	-0.23	-0.04	4.79	.08	.36	1176	742.8	36.0	8.6
67.00	5.41	-0.23	-0.04	5.15	.05	.32	1191	742.9	35.5	8.2
67.25	5.88	-0.22	-0.04	5.62	.00	.27	1210	743.0	35.0	7.8
67.50	6.77	-0.22	-0.04	6.52	-15.94	.21	1238	743.1	34.5	7.3
67.75	5.74	-0.21	-0.04	5.49	-16.01	.29	1206	743.2	34.0	6.9
68.00	5.24	-0.20	-0.03	5.01	.06	.34	1187	743.3	33.4	6.5
68.25	5.07	-0.19	-0.03	4.84	.09	.36	1179	743.4	32.9	6.1
68.50	5.12	-0.19	-0.03	4.90	.08	.35	1183	743.5	32.4	5.6
68.75	5.59	-0.18	-0.03	5.38	.03	.30	1203	743.6	31.9	5.2
69.00	6.93	-0.17	-0.03	6.73	-15.93	.20	1244	743.7	31.3	4.8
69.25	7.41	-0.17	-0.03	7.22	.90	.17	1259	743.9	30.8	4.4
69.50	6.39	-0.16	-0.03	6.20	.96	.23	1233	744.0	30.3	3.9
69.75	5.70	-0.15	-0.03	5.52	-16.01	.28	1213	744.1	29.7	3.5
70.00	5.43	-0.14	-0.03	5.26	.03	.30	1203	744.3	29.2	3.1
70.25	5.60	-0.14	-0.02	5.44	.03	.29	1208	744.5	28.7	2.7
70.50	5.76	-0.13	-0.02	5.61	.01	.28	1214	744.6	28.2	2.2
70.75	5.93	-0.12	-0.02	5.79	-15.99	.26	1222	744.8	27.6	1.8
71.00	5.78	-0.11	-0.02	5.65	-16.00	.27	1218	745.0	27.1	1.4
71.25	5.74	-0.10	-0.02	5.61	.01	.27	1218	745.2	26.6	1.0
71.50	5.27	-0.10	-0.02	5.15	.04	.31	1203	745.3	26.0	0.5
71.75	4.58	-0.09	-0.02	4.48	.11	.37	1179	745.5	25.5	0.1
40172.00	4.52	-0.08	-0.02	4.43	-16.12	-16.38	1176	745.7	25.0	-0.3
72.50	4.39	-0.06	-0.01	4.31	.14	.40	1170	746.2	23.9	-1.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40173.00	4.24	-0.04	-0.01	4.18	-16.16	-16.42	1165	746.6	22.8	-2.0
73.50	4.20	-0.03	-0.01	4.16	.16	.42	1166	747.1	21.7	-2.9
74.00	4.19	-0.01	-0.01	4.17	.15	.41	1169	747.5	20.7	-3.8
74.50	4.18	0.00	0.00	4.18	.16	.41	1170	748.0	19.6	-4.6
75.00	4.29	0.02	0.00	4.31	.15	.40	1176	748.5	18.5	-5.5
75.50	4.23	0.04	0.00	4.27	.15	.40	1175	749.1	17.4	-6.3
76.00	4.15	0.06	0.00	4.20	.16	.41	1173	749.6	16.3	-7.2
76.50	4.57	0.08	0.01	4.66	.11	.35	1195	750.2	15.2	-8.1
77.00	5.19	0.09	0.01	5.29	.05	.29	1221	750.8	14.1	-8.9
77.50	4.44	0.11	0.01	4.56	.12	.36	1196	751.4	13.0	-9.8
78.00	4.65	0.13	0.01	4.79	.10	.33	1207	752.0	11.9	-10.7
78.50	4.62	0.15	0.01	4.78	.10	.32	1210	752.6	10.8	-11.6
79.00	4.08	0.16	0.02	4.26	.15	.38	1190	753.3	9.6	-12.4
79.50	3.83	0.18	0.02	4.04	.18	.40	1182	754.0	8.5	-13.3
80.00	3.72	0.20	0.02	3.94	.19	.42	1178	754.6	7.4	-14.2
80.50	3.68	0.21	0.02	3.92	.20	.42	1179	755.3	6.2	-15.1
81.00	3.93	0.23	0.03	4.19	.17	.38	1193	756.0	5.1	-15.9
81.50	3.72	0.25	0.03	4.00	.20	.41	1184	756.7	3.9	-16.8
82.00	3.41	0.26	0.03	3.70	.23	.45	1172	757.4	2.7	-17.7
82.50	3.13	0.28	0.03	3.44	.27	.48	1161	758.1	1.6	-18.6
83.00	2.91	0.29	0.04	3.24	.30	.50	1152	758.9	0.4	-19.5
83.50	2.79	0.31	0.04	3.14	.32	.52	1149	759.6	359.2	-20.3
84.00	2.72	0.33	0.04	3.08	.33	.53	1145	760.3	358.0	-21.2
84.50	2.72	0.34	0.04	3.10	.33	.53	1147	761.1	356.8	-22.1
85.00	2.92	0.36	0.05	3.32	.30	.49	1161	761.8	355.6	-23.0
85.50	3.04	0.37	0.05	3.46	.28	.47	1171	762.6	354.3	-23.9
86.00	3.09	0.38	0.05	3.53	.28	.46	1175	763.4	353.1	-24.8
86.50	3.17	0.40	0.05	3.62	.27	.45	1181	764.1	351.8	-25.7
87.00	3.02	0.41	0.06	3.49	.28	.45	1178	764.9	350.6	-26.6
87.50	2.89	0.43	0.06	3.38	.30	.47	1174	765.7	349.3	-27.5
88.00	2.78	0.44	0.06	3.28	.32	.48	1170	766.5	348.0	-28.3
88.50	2.54	0.46	0.06	3.05	.35	.51	1160	767.3	346.7	-29.2
89.00	2.36	0.47	0.06	2.90	.37	.53	1153	768.0	345.3	-30.1
89.50	2.19	0.48	0.07	2.73	.41	.56	1144	768.8	344.0	-31.0
90.00	1.90	0.49	0.07	2.46	.46	.61	1126	769.6	342.6	-31.9
90.50	1.88	0.51	0.07	2.46	.47	.62	1126	770.4	341.2	-32.8
91.00	2.28	0.52	0.07	2.88	.40	.54	1154	771.2	339.8	-33.7
91.50	2.57	0.53	0.07	3.18	.35	.49	1176	772.0	338.4	-34.6
92.00	2.54	0.55	0.07	3.16	.35	.49	1176	772.8	336.9	-35.5
92.50	2.53	0.56	0.08	3.17	.35	.48	1178	773.6	335.4	-36.4
93.00	3.00	0.57	0.08	3.65	.28	.41	1207	774.3	333.8	-37.3
93.50	3.02	0.58	0.08	3.68	.27	.40	1213	775.1	332.3	-38.2
94.00	3.33	0.59	0.08	3.99	.23	.35	1231	775.9	330.6	-39.1
94.50	2.85	0.60	0.08	3.53	.29	.40	1212	776.7	329.0	-40.0
95.00	2.14	0.60	0.08	2.83	.39	.50	1178	777.5	327.3	-40.8
95.50	2.76	0.61	0.08	3.44	.30	.41	1213	778.2	325.5	-41.7
96.00	2.18	0.62	0.09	2.89	.38	.48	1185	779.0	323.7	-42.6
96.50	1.71	0.63	0.09	2.42	.47	.57	1155	779.7	321.8	-43.5
97.00	1.18	0.63	0.09	1.90	.58	.68	1117	780.5	319.8	-44.4
97.50	0.92	0.64	0.09	1.65	.65	.74	1097	781.2	317.8	-45.2
98.00	1.06	0.65	0.09	1.79	.61	.70	1111	782.0	315.6	-46.1
98.50	1.06	0.65	0.09	1.81	.60	.69	1116	782.7	313.4	-46.9
99.00	1.20	0.66	0.09	1.95	.57	.65	1129	783.4	311.0	-47.8
99.50	1.18	0.66	0.09	1.94	.58	.66	1128	784.1	308.5	-48.6
40200.00	1.24	0.67	0.09	2.00	.56	.64	1136	784.8	305.9	-49.5
00.50	1.20	0.67	0.09	1.96	.57	.64	1137	785.5	303.1	-50.3
01.00	1.18	0.67	0.09	1.95	.57	.64	1137	786.2	300.0	-51.1
01.50	1.30	0.67	0.09	2.07	.55	.62	1146	786.8	296.8	-51.8
02.00	1.37	0.67	0.09	2.14	.54	.60	1153	787.5	293.3	-52.6
02.50	1.23	0.68	0.09	2.00	.57	.63	1144	788.1	289.5	-53.3

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40203.00	0.90	0.68	0.09	1.67	-16.65	-16.71	1116	788.7	285.4	-54.0
03.50	0.77	0.68	0.09	1.54	.69	.75	1105	789.3	281.0	-54.6
04.00	0.65	0.68	0.09	1.42	.73	.78	1094	789.9	276.1	-55.2
04.50	0.66	0.68	0.09	1.43	.73	.78	1095	790.5	270.9	-55.8
05.00	0.70	0.68	0.09	1.46	.73	.77	1099	791.0	265.1	-56.3
05.50	0.75	0.67	0.09	1.52	.71	.75	1107	791.5	259.0	-56.7
06.00	0.89	0.67	0.09	1.65	.67	.71	1122	792.1	252.4	-57.0
06.50	0.84	0.67	0.09	1.59	.68	.72	1118	792.5	245.5	-57.2
07.00	0.59	0.66	0.09	1.34	.76	.80	1093	793.0	238.4	-57.3
07.50	0.59	0.65	0.09	1.33	.77	.80	1091	793.5	231.1	-57.3
08.00	0.61	0.65	0.09	1.34	.77	.80	1092	793.9	223.9	-57.2
08.50	0.70	0.64	0.09	1.43	.74	.77	1104	794.3	216.8	-57.0
40208.75	0.86	0.64	0.09	1.58	-16.70	-16.72	1120	794.5	213.4	-56.8
09.00	0.88	0.63	0.09	1.60	.69	.71	1124	794.7	210.1	-56.7
09.25	1.22	0.63	0.09	1.93	.60	.63	1154	794.9	206.9	-56.5
09.50	1.34	0.62	0.08	2.05	.57	.60	1165	795.0	203.7	-56.3
09.75	1.25	0.62	0.08	1.96	.60	.62	1158	795.2	200.7	-56.0
10.00	1.27	0.61	0.08	1.97	.59	.61	1160	795.4	197.8	-55.8
10.25	1.18	0.60	0.08	1.87	.62	.64	1152	795.5	195.0	-55.5
10.50	0.99	0.60	0.08	1.67	.67	.69	1133	795.7	192.3	-55.2
10.75	0.90	0.59	0.08	1.57	.70	.72	1123	795.8	189.8	-54.9
11.00	0.59	0.58	0.08	1.26	.80	.82	1090	796.0	187.3	-54.6
11.25	0.71	0.57	0.08	1.37	.76	.78	1105	796.1	184.9	-54.3
11.50	0.73	0.57	0.08	1.38	.75	.77	1109	796.2	182.7	-54.0
11.75	0.96	0.56	0.08	1.60	.68	.70	1132	796.3	180.5	-53.6
12.00	2.15	0.55	0.08	2.78	.44	.45	1222	796.5	178.4	-53.2
12.25	2.05	0.54	0.08	2.67	.45	.47	1217	796.6	176.4	-52.9
12.50	1.75	0.52	0.08	2.35	.51	.53	1195	796.7	174.5	-52.5
12.75	1.44	0.51	0.08	2.03	.58	.59	1171	796.8	172.7	-52.1
13.00	1.02	0.50	0.08	1.61	.68	.70	1135	796.9	170.9	-51.7
13.25	1.14	0.49	0.08	1.71	.66	.67	1143	796.9	169.2	-51.3
13.50	1.48	0.48	0.08	2.03	.58	.60	1170	797.0	167.5	-50.9
13.75	2.02	0.47	0.08	2.57	.47	.49	1211	797.1	165.9	-50.5
14.00	1.07	0.45	0.08	1.60	.68	.69	1138	797.2	164.4	-50.1
14.25	0.87	0.44	0.08	1.38	.75	.76	1114	797.2	162.9	-49.7
14.50	0.98	0.42	0.08	1.49	.72	.73	1124	797.3	161.5	-49.2
14.75	1.21	0.40	0.08	1.69	.67	.68	1142	797.3	160.1	-48.8
15.00	1.43	0.38	0.08	1.89	.62	.63	1160	797.4	158.8	-48.4
15.25	1.98	0.36	0.07	2.41	.50	.51	1203	797.4	157.5	-47.9
15.50	1.56	0.34	0.07	1.97	.58	.59	1174	797.4	156.2	-47.5
15.75	1.46	0.31	0.07	1.84	.62	.63	1161	797.5	155.0	-47.0
16.00	1.04	0.28	0.07	1.39	.75	.76	1116	797.5	153.8	-46.6
16.25	0.84	0.25	0.07	1.15	.83	.85	1087	797.5	152.6	-46.2
16.50	1.17	0.21	0.07	1.44	.74	.75	1118	797.5	151.5	-45.7
16.75	1.39	0.16	0.07	1.62	.69	.71	1135	797.5	150.4	-45.3
17.00	1.61	0.11	0.07	1.79	.65	.66	1151	797.5	149.3	-44.8
17.25	1.72	0.03	0.07	1.83	.63	.65	1156	797.5	148.2	-44.3
17.50	2.59	0.00	0.07	2.65	.46	.48	1220	797.5	147.2	-43.9
17.75	1.95	0.00	0.07	2.02	.58	.59	1177	797.4	146.2	-43.4
18.00	1.64	0.00	0.07	1.71	.66	.67	1147	797.4	145.2	-43.0
18.25	1.43	0.00	0.07	1.50	.73	.74	1125	797.4	144.2	-42.5
18.50	1.65	0.00	0.07	1.72	.66	.68	1147	797.3	143.3	-42.0
18.75	1.77	0.00	0.06	1.83	.63	.65	1158	797.3	142.3	-41.6
19.00	1.88	0.00	0.06	1.94	.61	.62	1167	797.3	141.4	-41.1
19.25	2.10	0.00	0.06	2.16	.57	.58	1183	797.2	140.5	-40.7
40219.50	2.10	0.00	0.06	2.17	-16.56	-16.58	1183	797.1	139.6	-40.2
20.00	2.04	0.00	0.06	2.10	.58	.59	1178	797.0	137.9	-39.3
20.50	1.75	0.00	0.06	1.81	.65	.66	1154	796.9	136.2	-38.3

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40221.00	1.61	0.00	0.06	1.66	-16.69	-16.70	1140	796.7	134.5	-37.4
21.50	1.56	0.00	0.06	1.62	.70	.72	1135	796.5	132.9	-36.4
22.00	1.65	0.00	0.06	1.71	.68	.69	1143	796.3	131.4	-35.5
22.50	1.64	0.00	0.05	1.69	.68	.70	1142	796.1	129.8	-34.6
23.00	1.62	0.00	0.05	1.68	.69	.71	1138	795.8	128.4	-33.6
23.50	1.45	0.00	0.05	1.50	.74	.77	1119	795.6	126.9	-32.7
24.00	1.41	0.00	0.05	1.46	.76	.78	1113	795.3	125.4	-31.7
24.50	1.42	0.00	0.05	1.47	.76	.78	1113	795.0	124.0	-30.8
25.00	1.43	0.00	0.05	1.48	.76	.78	1114	794.7	122.6	-29.8
25.50	1.47	0.00	0.05	1.52	.74	.77	1118	794.4	121.3	-28.9
26.00	1.48	0.00	0.04	1.53	.73	.76	1121	794.0	119.9	-28.0
26.50	1.45	0.00	0.04	1.49	.74	.77	1118	793.7	118.6	-27.0
27.00	1.41	0.00	0.04	1.45	.75	.79	1113	793.4	117.2	-26.1
27.50	1.66	0.00	0.04	1.71	.68	.71	1138	793.0	115.9	-25.1
28.00	1.87	0.00	0.04	1.91	.63	.66	1157	792.6	114.7	-24.2
28.50	2.15	0.00	0.04	2.19	.55	.59	1182	792.2	113.4	-23.3
29.00	2.09	0.00	0.04	2.13	.55	.59	1181	791.8	112.1	-22.3
29.50	2.03	0.00	0.04	2.07	.57	.61	1176	791.4	110.9	-21.4
30.00	2.00	0.00	0.04	2.04	.57	.62	1173	791.0	109.6	-20.4
30.50	1.97	0.00	0.04	2.00	.58	.63	1169	790.6	108.4	-19.5
31.00	1.94	0.00	0.04	1.97	.59	.64	1165	790.2	107.2	-18.6
31.50	1.94	0.00	0.04	1.97	.59	.64	1164	789.8	106.0	-17.6
32.00	1.88	0.00	0.03	1.92	.60	.66	1159	789.3	104.8	-16.7
32.50	1.89	0.00	0.03	1.92	.60	.66	1158	788.9	103.6	-15.8
33.00	1.94	0.00	0.03	1.98	.59	.64	1163	788.4	102.4	-14.9
33.50	1.98	0.00	0.03	2.01	.58	.63	1166	788.0	101.2	-13.9
34.00	2.04	0.00	0.03	2.07	.57	.63	1168	787.5	100.1	-13.0
34.50	2.10	0.00	0.03	2.13	.56	.62	1170	787.1	98.9	-12.1
35.00	2.08	0.00	0.03	2.12	.56	.62	1169	786.6	97.7	-11.2
35.50	2.11	0.00	0.03	2.15	.55	.61	1173	786.2	96.6	-10.2
40235.75	2.05	0.00	0.03	2.09	-16.56	-16.62	1169	785.9	96.0	-9.8
36.00	2.34	0.00	0.03	2.37	.50	.57	1189	785.7	95.4	-9.3
36.25	2.31	0.00	0.03	2.34	.50	.57	1189	785.5	94.9	-8.9
36.50	3.03	0.00	0.03	3.06	.38	.45	1234	785.2	94.3	-8.4
36.75	2.90	0.00	0.03	2.93	.40	.48	1225	785.0	93.7	-8.0
37.00	2.77	0.00	0.03	2.80	.42	.49	1218	784.8	93.2	-7.5
37.25	2.64	0.00	0.03	2.67	.44	.52	1209	784.6	92.6	-7.0
37.50	2.40	0.00	0.03	2.44	.48	.56	1193	784.3	92.0	-6.6
37.75	2.28	0.00	0.03	2.31	.50	.58	1185	784.1	91.5	-6.1
38.00	2.69	0.00	0.03	2.72	.43	.51	1212	783.9	90.9	-5.7
38.25	2.89	0.00	0.03	2.92	.40	.47	1225	783.6	90.4	-5.2
38.50	2.45	0.00	0.03	2.48	.46	.54	1199	783.4	89.8	-4.8
38.75	2.34	0.00	0.03	2.37	.48	.56	1190	783.2	89.2	-4.3
39.00	2.11	0.00	0.03	2.15	.52	.60	1174	782.9	88.7	-3.9
39.25	1.89	0.00	0.03	1.93	.57	.65	1156	782.7	88.1	-3.4
39.50	2.21	0.00	0.03	2.24	.50	.59	1180	782.5	87.6	-3.0
39.75	2.53	0.00	0.03	2.56	.44	.53	1202	782.3	87.0	-2.5
40.00	2.31	0.00	0.03	2.34	.48	.57	1186	782.0	86.5	-2.0
40.25	2.20	0.00	0.03	2.24	.50	.59	1178	781.8	85.9	-1.6
40.50	1.99	0.00	0.03	2.02	.55	.64	1160	781.6	85.4	-1.1
40.75	2.00	0.00	0.03	2.03	.55	.64	1159	781.4	84.8	-0.7
40241.00	2.11	0.00	0.03	2.14	-16.53	-16.62	1167	781.2	84.3	-0.2
41.50	2.04	0.00	0.03	2.07	.55	.64	1160	780.7	83.2	0.7
42.00	1.98	0.00	0.03	2.01	.56	.65	1153	780.3	82.1	1.6
42.50	1.92	0.00	0.03	1.96	.57	.67	1147	779.9	81.0	2.4
43.00	1.92	0.00	0.03	1.96	.58	.67	1145	779.4	79.9	3.3
43.50	1.90	0.00	0.03	1.94	.58	.68	1142	779.0	78.8	4.2
44.00	1.89	0.00	0.03	1.92	.58	.68	1140	778.6	77.7	5.1

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40244.50	1.85	0.00	0.03	1.88	-16.59	-16.69	1137	778.3	76.6	6.0
45.00	1.86	0.00	0.03	1.90	.58	.68	1139	777.9	75.6	6.9
40245.25	1.73	0.00	0.03	1.76	-16.61	-16.72	1126	777.7	75.0	7.3
45.50	2.50	0.00	0.03	2.53	.46	.57	1183	777.5	74.5	7.8
45.75	3.05	0.00	0.03	3.09	.36	.47	1220	777.3	73.9	8.2
46.00	3.40	0.00	0.03	3.43	.31	.42	1243	777.1	73.4	8.7
46.25	3.43	0.00	0.03	3.46	.30	.41	1245	777.0	72.9	9.1
46.50	3.13	0.00	0.03	3.17	.33	.44	1230	776.8	72.3	9.5
46.75	2.73	0.00	0.03	2.77	.39	.50	1208	776.6	71.8	10.0
47.00	2.86	0.00	0.03	2.90	.37	.48	1216	776.5	71.3	10.4
47.25	3.43	0.00	0.04	3.46	.29	.40	1248	776.3	70.7	10.9
47.50	3.13	0.00	0.04	3.17	.33	.44	1229	776.1	70.2	11.3
47.75	2.31	0.00	0.04	2.34	.46	.58	1176	776.0	69.7	11.7
40248.00	2.44	0.00	0.04	2.48	-16.44	-16.55	1185	775.8	69.1	12.2
48.50	2.42	0.00	0.04	2.45	.44	.56	1183	775.6	68.1	13.1
49.00	2.40	0.00	0.04	2.43	.44	.56	1181	775.3	67.0	13.9
49.50	2.35	0.00	0.04	2.38	.46	.58	1173	775.0	65.9	14.8
50.00	2.27	0.00	0.04	2.31	.48	.60	1164	774.8	64.9	15.7
50.50	2.12	0.00	0.04	2.15	.51	.63	1151	774.6	63.8	16.5
51.00	2.01	0.00	0.04	2.05	.53	.65	1143	774.4	62.8	17.4
51.50	2.10	0.00	0.04	2.13	.51	.63	1150	774.2	61.7	18.3
52.00	2.31	0.00	0.04	2.35	.47	.59	1164	774.0	60.6	19.1
52.50	2.50	0.00	0.04	2.53	.44	.56	1176	773.9	59.6	20.0
53.00	2.68	0.00	0.04	2.72	.40	.52	1189	773.7	58.5	20.8
53.50	2.86	0.00	0.04	2.90	.38	.50	1198	773.6	57.5	21.7
40254.00	2.99	0.00	0.04	3.02	-16.36	-16.48	1205	773.5	56.4	22.6
54.25	3.33	0.00	0.04	3.37	.31	.43	1223	773.5	55.9	23.0
54.50	3.35	0.00	0.04	3.39	.31	.43	1225	773.5	55.4	23.4
54.75	3.58	0.00	0.04	3.62	.27	.39	1241	773.5	54.8	23.8
55.00	5.52	0.00	0.04	5.56	.06	.19	1331	773.4	54.3	24.3
55.25	6.93	0.00	0.04	6.97	-15.96	.08	1383	773.4	53.8	24.7
55.50	5.24	0.00	0.04	5.28	-16.08	.20	1321	773.4	53.3	25.1
55.75	3.66	0.00	0.04	3.69	.24	.36	1251	773.4	52.7	25.5
56.00	4.10	0.00	0.04	4.13	.19	.31	1272	773.4	52.2	26.0
56.25	3.26	0.00	0.04	3.29	.29	.42	1227	773.4	51.7	26.4
56.50	3.38	0.00	0.04	3.41	.29	.41	1230	773.5	51.2	26.8
56.75	3.39	0.00	0.04	3.43	.29	.41	1231	773.5	50.6	27.2
57.00	3.72	0.00	0.04	3.76	.24	.36	1248	773.5	50.1	27.7
57.25	3.52	0.00	0.04	3.55	.27	.39	1237	773.5	49.6	28.1
57.50	3.52	0.00	0.04	3.56	.27	.39	1236	773.6	49.1	28.5
57.75	3.53	0.00	0.04	3.57	.28	.40	1234	773.6	48.5	28.9
58.00	3.43	0.00	0.04	3.47	.29	.41	1228	773.7	48.0	29.4
58.25	3.33	0.00	0.04	3.36	.29	.41	1225	773.7	47.5	29.8
58.50	4.07	0.00	0.04	4.11	.20	.32	1264	773.8	46.9	30.2
58.75	3.33	0.00	0.04	3.37	.30	.42	1224	773.8	46.4	30.6
40259.00	3.41	0.00	0.04	3.45	-16.29	-16.41	1227	773.9	45.9	31.0
59.50	3.32	0.02	0.04	3.38	.30	.42	1222	774.1	44.8	31.9
60.00	3.31	0.07	0.04	3.42	.29	.41	1224	774.3	43.8	32.7
60.50	3.13	0.12	0.04	3.29	.31	.43	1216	774.5	42.7	33.6
61.00	2.94	0.16	0.04	3.14	.33	.45	1206	774.7	41.7	34.4
61.50	2.77	0.20	0.04	3.01	.36	.47	1196	774.9	40.6	35.2
62.00	2.85	0.24	0.04	3.14	.34	.46	1201	775.2	39.5	36.1
62.50	2.97	0.27	0.04	3.28	.32	.43	1210	775.5	38.5	36.9
40262.75	3.10	0.28	0.04	3.43	-16.30	-16.41	1218	775.7	37.9	37.3
63.00	2.85	0.30	0.04	3.19	.33	.44	1207	775.8	37.4	37.7

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40263.25	1.86	0.31	0.04	2.22	-16.48	-16.59	1146	776.0	36.9	38.1
63.50	2.36	0.33	0.04	2.73	.39	.50	1182	776.2	36.3	38.5
63.75	2.00	0.34	0.05	2.38	.45	.55	1159	776.3	35.8	39.0
64.00	1.32	0.35	0.05	1.71	.59	.69	1104	776.5	35.3	39.4
64.25	3.83	0.36	0.05	4.24	.20	.31	1261	776.7	34.7	39.8
64.50	2.30	0.37	0.05	2.71	.41	.52	1173	776.9	34.2	40.2
64.75	2.14	0.38	0.05	2.56	.44	.55	1159	777.1	33.6	40.6
40265.00	1.96	0.39	0.05	2.39	-16.47	-16.57	1149	777.3	33.1	41.0
65.50	1.87	0.41	0.05	2.33	.48	.58	1145	777.7	32.0	41.8
66.00	1.82	0.43	0.05	2.29	.49	.59	1142	778.1	30.9	42.7
66.50	1.79	0.44	0.05	2.28	.49	.59	1140	778.6	29.9	43.5
67.00	2.09	0.46	0.05	2.60	.44	.53	1162	779.0	28.8	44.3
67.50	2.52	0.48	0.05	3.05	.37	.46	1191	779.5	27.7	45.1
68.00	2.06	0.49	0.05	2.60	.44	.53	1163	780.0	26.6	45.9
68.50	1.96	0.51	0.05	2.52	.45	.54	1156	780.5	25.5	46.8
69.00	1.73	0.52	0.05	2.30	.50	.58	1137	781.1	24.4	47.6
69.50	1.72	0.54	0.06	2.32	.50	.58	1136	781.6	23.2	48.4
70.00	1.74	0.55	0.06	2.34	.50	.58	1136	782.2	22.1	49.2
70.50	1.69	0.57	0.06	2.32	.51	.59	1134	782.7	21.0	50.0
71.00	1.69	0.58	0.06	2.33	.51	.58	1135	783.3	19.9	50.8
71.50	1.92	0.59	0.06	2.56	.46	.53	1153	783.9	18.7	51.6
72.00	2.37	0.60	0.06	3.03	.39	.46	1184	784.5	17.6	52.5
72.50	2.54	0.61	0.06	3.21	.36	.43	1195	785.1	16.4	53.3
73.00	2.67	0.63	0.06	3.36	.34	.41	1204	785.8	15.3	54.1
73.50	2.78	0.64	0.06	3.48	.33	.39	1210	786.4	14.1	54.9
74.00	2.87	0.65	0.07	3.59	.32	.38	1213	787.0	12.9	55.7
74.50	2.89	0.66	0.07	3.61	.32	.38	1214	787.7	11.7	56.5
75.00	2.92	0.67	0.07	3.65	.31	.37	1218	788.4	10.5	57.3
75.50	3.27	0.68	0.07	4.01	.27	.32	1238	789.0	9.3	58.1
76.00	3.34	0.69	0.07	4.10	.26	.30	1243	789.7	8.1	58.9
76.50	3.12	0.70	0.07	3.89	.28	.33	1232	790.4	6.8	59.7
77.00	2.79	0.71	0.07	3.57	.32	.36	1217	791.0	5.5	60.4
77.50	2.54	0.72	0.07	3.33	.35	.39	1203	791.7	4.3	61.2
78.00	2.87	0.72	0.07	3.66	.31	.35	1221	792.4	3.0	62.0
78.50	3.25	0.73	0.07	4.05	.27	.30	1241	793.1	1.7	62.8
79.00	3.65	0.74	0.07	4.46	.23	.26	1259	793.8	0.3	63.6
79.50	4.02	0.75	0.07	4.84	.19	.22	1276	794.5	358.9	64.4
80.00	4.49	0.76	0.07	5.32	.15	.17	1295	795.2	357.6	65.2
80.50	3.13	0.76	0.07	3.97	.29	.30	1236	795.9	356.1	65.9
81.00	2.45	0.77	0.08	3.30	.37	.39	1200	796.6	354.7	66.7
81.50	2.31	0.77	0.08	3.16	.40	.41	1190	797.3	353.2	67.5
82.00	2.19	0.78	0.08	3.05	.42	.43	1183	798.0	351.7	68.2
82.50	1.86	0.78	0.08	2.72	.47	.48	1161	798.7	350.1	69.0
83.00	1.47	0.79	0.08	2.34	.55	.55	1131	799.4	348.5	69.8
83.50	1.16	0.79	0.08	2.03	.62	.62	1104	800.1	346.9	70.5
84.00	0.85	0.80	0.08	1.73	.70	.69	1075	800.8	345.2	71.3
84.50	0.99	0.80	0.08	1.87	.66	.66	1088	801.5	343.4	72.0
85.00	1.11	0.80	0.08	1.99	.63	.62	1101	802.2	341.5	72.7
85.50	1.20	0.80	0.08	2.08	.61	.60	1111	802.9	339.6	73.5
86.00	1.47	0.81	0.08	2.36	.56	.54	1131	803.6	337.6	74.2
86.50	1.40	0.81	0.08	2.29	.58	.56	1126	804.3	335.5	74.9
87.00	1.23	0.81	0.08	2.12	.61	.59	1114	805.0	333.3	75.6
87.50	1.16	0.82	0.08	2.06	.62	.60	1110	805.7	331.0	76.3
88.00	1.09	0.82	0.08	1.99	.64	.61	1104	806.3	328.5	77.0
88.50	1.00	0.82	0.08	1.90	.66	.63	1095	807.0	325.9	77.7
89.00	0.88	0.82	0.08	1.78	.69	.66	1084	807.7	323.0	78.3
89.50	0.76	0.82	0.08	1.66	.72	.69	1072	808.3	320.0	78.9
90.00	0.76	0.82	0.08	1.66	.73	.69	1072	809.0	316.8	79.5
90.50	0.80	0.82	0.08	1.70	.72	.68	1076	809.6	313.2	80.1

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40291.00	0.80	0.82	0.08	1.70	-16.72	-16.68	1076	810.2	309.4	80.6
91.50	0.86	0.82	0.08	1.75	.71	.66	1082	810.9	305.3	81.1
92.00	1.15	0.82	0.08	2.05	.63	.58	1113	811.5	300.7	81.6
92.50	1.18	0.81	0.08	2.08	.62	.57	1117	812.1	295.8	82.0
93.00	0.66	0.81	0.08	1.55	.76	.70	1064	812.7	290.4	82.4
93.50	0.60	0.81	0.08	1.48	.79	.73	1054	813.3	284.6	82.6
94.00	0.43	0.81	0.08	1.31	.84	.79	1033	813.9	278.4	82.8
94.50	0.61	0.81	0.08	1.49	.79	.73	1056	814.5	271.8	82.9
95.00	0.61	0.80	0.08	1.49	.79	.73	1057	815.0	264.9	82.9
95.50	1.09	0.79	0.08	1.96	.67	.80	1106	815.6	257.8	82.8
96.00	1.26	0.79	0.08	2.14	.63	.76	1121	816.1	250.6	82.6
96.50	1.40	0.79	0.08	2.27	.60	.73	1133	816.6	243.6	82.2
97.00	1.55	0.78	0.08	2.40	.57	.70	1145	817.1	236.8	81.8
97.50	1.73	0.78	0.08	2.58	.53	.67	1159	817.6	230.3	81.3
98.00	1.80	0.77	0.08	2.65	.52	.65	1165	818.1	224.3	80.6
98.50	1.67	0.76	0.07	2.51	.54	.67	1156	818.6	218.7	79.9
40299.00	1.55	0.76	0.07	2.38	-16.57	-16.70	1146	819.0	213.5	79.2
99.25	1.58	0.75	0.07	2.41	.57	.69	1148	819.3	211.0	78.8
99.50	1.29	0.75	0.07	2.11	.62	.75	1126	819.5	208.7	78.4
99.75	2.27	0.75	0.07	3.09	.46	.58	1192	819.7	206.5	77.9
40300.00	2.61	0.74	0.07	3.43	.40	.53	1214	819.9	204.4	77.5
00.25	2.95	0.74	0.07	3.76	.35	.48	1235	820.1	202.3	77.0
00.50	2.75	0.74	0.07	3.56	.38	.51	1223	820.3	200.4	76.6
00.75	2.77	0.73	0.07	3.57	.39	.51	1220	820.5	198.5	76.1
01.00	2.46	0.73	0.07	3.26	.43	.55	1205	820.7	196.7	75.6
01.25	2.36	0.72	0.07	3.16	.44	.56	1200	820.9	194.9	75.1
01.50	2.37	0.72	0.07	3.16	.44	.56	1200	821.1	193.3	74.6
01.75	2.27	0.72	0.07	3.05	.46	.58	1192	821.3	191.7	74.1
02.00	2.05	0.71	0.07	2.84	.49	.61	1180	821.5	190.1	73.6
02.25	1.95	0.71	0.07	2.73	.50	.62	1175	821.7	188.6	73.1
02.50	1.95	0.71	0.07	2.72	.50	.62	1175	821.8	187.2	72.6
02.75	2.05	0.70	0.07	2.82	.49	.61	1181	822.0	185.8	72.0
03.00	2.04	0.70	0.07	2.81	.49	.61	1180	822.2	184.5	71.5
03.25	1.93	0.69	0.07	2.69	.52	.63	1171	822.3	183.2	71.0
03.50	1.92	0.69	0.07	2.67	.52	.64	1169	822.5	181.9	70.4
40303.60	1.34	0.69	0.07	2.09	-16.63	-16.74	1128	822.5	181.4	70.2
03.80	2.99	0.68	0.07	3.74	.37	.49	1229	822.7	180.5	69.8
04.00	5.98	0.68	0.07	6.72	.10	.22	1345	822.8	179.5	69.4
04.20	10.12	0.68	0.06	10.86	-15.87	-15.99	1459	822.9	178.6	68.9
04.40	7.61	0.67	0.06	8.35	.99	-16.10	1400	823.0	177.7	68.5
04.60	3.28	0.67	0.06	4.01	-16.31	.43	1253	823.1	176.8	68.0
04.80	2.76	0.67	0.06	3.49	.39	.50	1223	823.3	175.9	67.6
40305.00	2.38	0.66	0.06	3.11	-16.45	-16.56	1198	823.4	175.1	67.1
05.50	2.23	0.65	0.06	2.94	.48	.60	1185	823.6	173.0	66.0
06.00	1.89	0.64	0.06	2.59	.54	.65	1163	823.9	171.1	64.9
06.50	1.68	0.63	0.06	2.37	.59	.70	1145	824.1	169.2	63.8
07.00	1.46	0.62	0.06	2.14	.64	.74	1126	824.3	167.4	62.6
07.50	1.08	0.61	0.06	1.75	.73	.83	1093	824.5	165.6	61.5
08.00	0.97	0.60	0.06	1.62	.77	.87	1078	824.7	164.0	60.3
08.50	1.01	0.59	0.05	1.65	.76	.86	1081	824.8	162.3	59.2
09.00	1.34	0.58	0.05	1.97	.68	.78	1110	825.0	160.8	58.0
09.50	1.59	0.57	0.05	2.21	.63	.73	1129	825.1	159.2	56.8
10.00	1.57	0.55	0.05	2.18	.63	.74	1129	825.3	157.8	55.7
10.50	1.35	0.54	0.05	1.94	.69	.79	1109	825.4	156.3	54.5
11.00	1.06	0.53	0.05	1.64	.76	.86	1082	825.5	154.9	53.3
11.50	0.73	0.51	0.05	1.29	.86	.96	1044	825.5	153.5	52.2
12.00	0.85	0.50	0.05	1.39	.83	.93	1054	825.6	152.1	51.0

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40312.50	1.36	0.49	0.05	1.90	-16.70	-16.80	1106	825.7	150.8	49.8
13.00	1.41	0.47	0.04	1.92	.69	.79	1109	825.7	149.5	48.6
13.50	1.35	0.46	0.04	1.85	.71	.81	1103	825.7	148.2	47.4
14.00	1.45	0.45	0.04	1.93	.69	.79	1110	825.8	146.9	46.3
14.50	1.58	0.43	0.04	2.05	.66	.76	1119	825.8	145.6	45.1
15.00	1.37	0.42	0.04	1.82	.72	.82	1098	825.8	144.4	43.9
15.50	1.14	0.40	0.04	1.58	.78	.88	1076	825.8	143.2	42.7
16.00	1.04	0.39	0.04	1.47	.81	.91	1063	825.7	142.0	41.5
16.50	0.93	0.37	0.04	1.34	.86	.96	1047	825.7	140.8	40.3
17.00	0.90	0.36	0.04	1.30	.87	.97	1041	825.7	139.6	39.1
17.50	0.88	0.34	0.03	1.25	.89	.99	1034	825.6	138.4	37.9
18.00	1.08	0.32	0.03	1.43	.83	.93	1057	825.6	137.3	36.7
18.50	1.18	0.30	0.03	1.51	.80	.91	1067	825.5	136.1	35.5
19.00	1.07	0.29	0.03	1.39	.84	.95	1052	825.4	135.0	34.3
19.50	0.82	0.27	0.03	1.12	.94	-17.04	1014	825.4	133.9	33.1
20.00	0.70	0.25	0.03	.99	-17.00	.10	992	825.3	132.7	31.9
20.50	1.03	0.24	0.03	1.29	-16.89	-16.98	1037	825.2	131.6	30.7
21.00	1.15	0.22	0.03	1.39	.85	.95	1049	825.1	130.5	29.6
21.50	1.23	0.20	0.03	1.45	.84	.93	1056	825.0	129.4	28.4
22.00	1.00	0.17	0.02	1.19	.92	-17.02	1023	824.9	128.3	27.2
22.50	1.04	0.15	0.02	1.22	.91	.01	1028	824.8	127.2	26.0
23.00	1.13	0.12	0.02	1.28	.89	-16.99	1036	824.7	126.2	24.8
23.50	1.26	0.09	0.02	1.37	.86	.96	1047	824.6	125.1	23.6
24.00	1.42	0.06	0.02	1.51	.81	.91	1066	824.4	124.0	22.4
24.50	1.68	0.04	0.02	1.74	.74	.85	1092	824.3	122.9	21.2
25.00	1.80	0.02	0.02	1.83	.71	.82	1101	824.2	121.9	20.0
25.50	1.96	0.00	0.02	1.98	.68	.79	1115	824.1	120.8	18.8
40326.00	1.91	0.00	0.02	1.93	-16.68	-16.79	1112	824.0	119.8	17.6
27.00	2.02	0.00	0.02	2.03	.66	.77	1123	823.7	117.7	15.2
28.00	2.10	0.00	0.01	2.11	.63	.75	1131	823.5	115.6	12.8
29.00	2.05	0.00	0.01	2.06	.65	.76	1127	823.3	113.5	10.4
30.00	1.76	0.00	0.01	1.77	.72	.83	1098	823.1	111.4	8.0
31.00	1.67	0.00	0.01	1.68	.75	.86	1088	822.9	109.4	5.6
32.00	1.85	0.00	0.01	1.86	.70	.81	1107	822.7	107.3	3.3
33.00	1.96	0.00	0.01	1.97	.67	.78	1120	822.6	105.3	0.9
34.00	2.05	0.00	0.01	2.06	.64	.76	1129	822.5	103.2	-1.5
35.00	2.06	0.00	0.01	2.07	.64	.76	1130	822.4	101.2	-3.8
36.00	1.86	0.00	0.01	1.87	.68	.80	1115	822.3	99.1	-6.2
37.00	1.82	0.00	0.01	1.83	.69	.80	1113	822.3	97.1	-8.6
40337.50	1.78	0.00	0.01	1.80	-16.70	-16.81	1110	822.3	96.1	-9.7
38.00	1.87	0.00	0.01	1.88	.67	.79	1120	822.4	95.1	-10.9
38.50	1.98	0.00	0.01	2.00	.64	.75	1132	822.4	94.0	-12.1
39.00	2.02	0.00	0.01	2.03	.63	.75	1136	822.4	93.0	-13.3
39.50	2.13	0.00	0.01	2.15	.59	.71	1151	822.5	92.0	-14.4
40.00	1.98	0.00	0.02	1.99	.63	.74	1138	822.6	91.0	-15.6
40.50	1.93	0.00	0.02	1.95	.65	.76	1129	822.7	89.9	-16.8
41.00	1.81	0.00	0.02	1.83	.67	.79	1121	822.8	88.9	-18.0
41.50	1.74	0.00	0.02	1.76	.68	.80	1117	822.9	87.9	-19.1
42.00	1.67	0.00	0.02	1.69	.70	.82	1110	823.0	86.9	-20.3
42.50	1.58	0.00	0.02	1.60	.73	.84	1098	823.2	85.9	-21.5
43.00	1.54	0.00	0.02	1.56	.75	.85	1093	823.3	84.8	-22.6
43.50	1.50	0.00	0.02	1.53	.75	.86	1092	823.5	83.8	-23.8
44.00	1.52	0.00	0.03	1.55	.74	.85	1098	823.7	82.8	-25.0
44.50	1.59	0.00	0.03	1.62	.72	.82	1106	823.9	81.7	-26.1
45.00	1.51	0.00	0.03	1.54	.74	.85	1096	824.2	80.7	-27.3
45.50	1.46	0.00	0.03	1.49	.76	.86	1090	824.4	79.7	-28.5
46.00	1.43	0.00	0.03	1.46	.77	.87	1088	824.7	78.6	-29.6
46.50	1.44	0.00	0.03	1.47	.76	.86	1090	825.0	77.6	-30.8

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40347.00	1.64	0.00	0.03	1.68	-16.70	-16.80	1115	825.3	76.6	-31.9
48.00	1.67	0.00	0.03	1.71	.69	.79	1120	826.0	74.5	-34.2
49.00	1.72	0.00	0.04	1.76	.69	.78	1123	826.8	72.4	-36.5
50.00	1.79	0.00	0.04	1.83	.67	.76	1131	827.6	70.3	-38.8
51.00	1.86	0.00	0.04	1.90	.65	.73	1142	828.6	68.1	-41.1
52.00	1.97	0.00	0.04	2.01	.63	.70	1152	829.6	66.0	-43.4
53.00	2.09	0.00	0.05	2.14	.60	.67	1164	830.8	63.8	-45.7
40353.50	2.17	0.00	0.05	2.22	-16.59	-16.66	1172	831.3	62.7	-46.9
54.00	2.33	0.00	0.05	2.38	.55	.62	1189	832.0	61.7	-48.0
54.50	2.60	0.00	0.05	2.65	.49	.56	1216	832.6	60.6	-49.1
55.00	2.74	0.00	0.05	2.80	.46	.53	1228	833.3	59.5	-50.3
55.50	2.90	0.00	0.05	2.95	.45	.51	1237	834.0	58.4	-51.4
40355.75	3.14	0.00	0.05	3.19	-16.42	-16.48	1251	834.3	57.8	-52.0
56.00	3.41	0.00	0.05	3.46	.38	.44	1270	834.7	57.2	-52.5
56.25	4.32	0.00	0.05	4.37	.26	.32	1324	835.0	56.7	-53.1
56.50	3.74	0.00	0.05	3.79	.32	.38	1296	835.4	56.1	-53.7
56.75	3.48	0.00	0.05	3.53	.35	.41	1284	835.8	55.6	-54.2
57.00	2.79	0.00	0.06	2.85	.44	.50	1242	836.2	55.0	-54.8
57.25	2.53	0.00	0.06	2.59	.49	.55	1221	836.5	54.4	-55.3
57.50	2.06	0.00	0.06	2.12	.59	.64	1181	836.9	53.9	-55.9
57.75	1.91	0.00	0.06	1.97	.63	.68	1164	837.3	53.3	-56.5
40358.00	1.89	0.00	0.06	1.95	-16.64	-16.68	1160	837.7	52.7	-57.0
58.50	1.69	0.00	0.06	1.75	.69	.73	1137	838.5	51.6	-58.2
59.00	1.71	0.00	0.06	1.77	.69	.73	1140	839.4	50.4	-59.3
59.50	1.75	0.00	0.06	1.81	.68	.71	1145	840.2	49.3	-60.4
60.00	1.85	0.00	0.06	1.92	.65	.69	1157	841.1	48.1	-61.5
60.50	1.63	0.00	0.06	1.70	.71	.74	1133	842.0	46.9	-62.6
61.00	1.53	0.00	0.07	1.59	.74	.77	1119	842.9	45.7	-63.7
61.50	1.50	0.00	0.07	1.57	.75	.77	1115	843.9	44.5	-64.9
62.00	1.58	0.00	0.07	1.65	.73	.75	1125	844.8	43.3	-66.0
62.50	1.64	0.11	0.07	1.82	.69	.71	1146	845.8	42.1	-67.1
63.00	1.59	0.20	0.07	1.86	.68	.69	1151	846.8	40.8	-68.2
63.50	1.23	0.27	0.07	1.57	.76	.77	1117	847.8	39.6	-69.3
64.00	1.02	0.32	0.07	1.42	.80	.81	1097	848.8	38.3	-70.4
64.50	0.90	0.36	0.07	1.34	.83	.83	1085	849.8	37.0	-71.5
65.00	0.86	0.40	0.08	1.34	.83	.83	1084	850.9	35.7	-72.6
65.50	0.85	0.43	0.08	1.36	.83	.82	1087	851.9	34.3	-73.7
66.00	0.74	0.46	0.08	1.28	.86	.85	1074	853.0	33.0	-74.7
66.50	0.71	0.48	0.08	1.27	.86	.85	1071	854.1	31.6	-75.8
67.00	0.68	0.50	0.08	1.26	.87	.85	1069	855.2	30.2	-76.9
67.50	0.60	0.52	0.08	1.20	.89	.87	1058	856.3	28.8	-78.0
68.00	0.58	0.54	0.08	1.19	.90	.88	1056	857.5	27.3	-79.1
68.50	0.50	0.55	0.08	1.14	.92	.89	1046	858.6	25.8	-80.1
69.00	0.40	0.57	0.09	1.05	.96	.93	1027	859.7	24.3	-81.2
69.50	0.39	0.58	0.09	1.05	.96	.93	1026	860.9	22.7	-82.3
70.00	0.40	0.59	0.09	1.08	.95	.91	1033	862.1	21.1	-83.3
70.50	0.39	0.60	0.09	1.08	.94	.91	1035	863.2	19.5	-84.4
71.00	0.38	0.61	0.09	1.08	.94	.91	1036	864.4	17.7	-85.4
71.50	0.29	0.62	0.09	1.01	.97	.93	1020	865.6	16.0	-86.5
72.00	0.21	0.63	0.09	.93	-17.01	.97	999	866.8	14.1	-87.5
72.50	0.16	0.63	0.09	.88	.03	.99	986	868.0	12.2	-88.5
73.00	0.19	0.64	0.09	.92	.02	.97	999	869.2	10.2	-89.5
73.50	0.17	0.65	0.09	.91	.02	.97	999	870.4	8.1	-90.5
74.00	0.15	0.65	0.09	.90	.02	.97	999	871.7	5.0	-91.5
74.50	0.11	0.66	0.09	.86	.04	.99	987	872.9	3.6	-92.5
75.00	0.12	0.66	0.09	.88	.03	.98	993	874.1	1.2	-93.5
75.50	0.14	0.67	0.09	.90	.03	.97	999	875.3	358.6	-94.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40376.00	0.22	0.67	0.09	.98	-16.99	-16.93	1021	876.5	355.9	-95.4
76.50	0.24	0.67	0.09	1.00	.99	.92	1025	877.7	352.9	-96.3
77.00	0.32	0.67	0.09	1.08	.96	.89	1045	879.0	349.7	-97.2
77.50	0.35	0.67	0.09	1.11	.95	.88	1050	880.2	346.3	-98.1
78.00	0.36	0.67	0.09	1.12	.95	.88	1052	881.4	342.5	-98.9
78.50	0.37	0.67	0.09	1.13	.95	.87	1054	882.6	338.5	-99.7
79.00	0.39	0.67	0.09	1.15	.95	.86	1057	883.8	334.1	-100.5
79.50	0.38	0.67	0.09	1.14	.96	.87	1052	885.0	329.2	-101.2
80.00	0.46	0.66	0.09	1.21	.94	.84	1067	886.2	323.9	-101.8
80.50	0.53	0.66	0.09	1.29	.91	.81	1083	887.4	318.2	-102.4
81.00	0.64	0.66	0.09	1.39	.89	.78	1101	888.5	312.0	-102.9
81.50	0.59	0.66	0.09	1.34	.91	.79	1092	889.7	305.3	-103.3
82.00	0.47	0.65	0.09	1.21	.95	.84	1066	890.8	298.3	-103.6
82.50	0.38	0.65	0.09	1.11	.99	.87	1044	892.0	291.0	-103.7
83.00	0.34	0.64	0.08	1.07	-17.01	.89	1036	893.1	283.6	-103.8
83.50	0.50	0.64	0.08	1.22	-16.95	.84	1073	894.2	276.3	-103.7
84.00	0.63	0.64	0.08	1.35	.92	.79	1099	895.3	269.1	-103.6
84.50	0.76	0.64	0.08	1.48	.88	.75	1123	896.4	262.3	-103.3
85.00	0.64	0.62	0.08	1.34	.93	.79	1099	897.5	255.8	-102.9
85.50	0.62	0.62	0.08	1.32	.93	.80	1097	898.6	249.9	-102.4
40386.00	0.58	0.61	0.08	1.27	-16.95	-16.82	1087	899.6	244.4	-101.9
87.00	0.58	0.60	0.08	1.26	.96	.82	1089	901.6	234.8	-100.6
88.00	0.49	0.58	0.08	1.14	-17.00	.87	1068	903.6	226.7	-99.1
89.00	0.38	0.57	0.07	1.02	.05	.92	1043	905.4	219.8	-97.5
90.00	0.30	0.55	0.07	.92	.09	.96	1025	907.2	213.9	-95.8
91.00	0.25	0.53	0.07	.85	.12	-17.00	1011	908.9	208.7	-94.0
92.00	0.23	0.50	0.06	.80	.15	.03	998	910.5	204.1	-92.2
93.00	0.22	0.48	0.06	.77	.18	.05	991	911.9	199.9	-90.3
94.00	0.20	0.46	0.06	.72	.21	.08	978	913.3	196.1	-88.3
95.00	0.19	0.44	0.05	.69	.23	.10	971	914.5	192.5	-86.4
96.00	0.19	0.41	0.05	.65	.26	.13	957	915.7	189.2	-84.4
97.00	0.18	0.39	0.04	.61	.30	.16	943	916.7	186.0	-82.3
98.00	0.15	0.37	0.04	.56	.34	.20	924	917.6	183.0	-80.3
99.00	0.15	0.34	0.04	.53	.37	.23	915	918.3	180.2	-78.2
40400.00	0.16	0.31	0.03	.50	.40	.26	904	919.0	177.4	-76.2
01.00	0.19	0.29	0.03	.50	.40	.27	909	919.5	174.7	-74.1
02.00	0.21	0.26	0.02	.49	.42	.28	909	919.8	172.1	-72.0
03.00	0.25	0.23	0.02	.50	.42	.28	918	920.1	169.5	-69.9
04.00	0.33	0.20	0.02	.55	.39	.24	946	920.2	167.0	-67.8
05.00	0.36	0.17	0.01	.54	.40	.25	947	920.2	164.6	-65.6
06.00	0.38	0.14	0.01	.52	.42	.27	942	920.1	162.2	-63.5
07.00	0.40	0.11	0.00	.51	.44	.29	941	919.8	159.8	-61.3
08.00	0.42	0.08	0.00	.50	.45	.30	940	919.4	157.5	-59.2
09.00	0.46	0.05	-0.01	.50	.46	.30	943	918.9	155.2	-57.0
10.00	0.50	0.02	-0.01	.51	.45	.30	953	918.3	152.9	-54.8
11.00	0.54	-0.01	-0.02	.52	.45	.30	962	917.5	150.7	-52.6
12.00	0.61	-0.04	-0.02	.54	.44	.28	976	916.6	148.4	-50.4
13.00	0.64	-0.07	-0.02	.55	.43	.28	986	915.5	146.2	-48.2
14.00	0.65	-0.10	-0.03	.53	.45	.30	980	914.4	144.0	-46.0
15.00	0.66	-0.13	-0.03	.50	.48	.32	967	913.1	141.9	-43.8
16.00	0.68	-0.16	-0.03	.48	.50	.34	961	911.8	139.7	-41.6
17.00	0.67	-0.19	-0.04	.45	.53	.38	954	910.3	137.5	-39.4
18.00	0.66	-0.21	-0.04	.41	.56	.42	939	908.6	135.4	-37.2
19.00	0.65	-0.24	-0.04	.37	.60	.47	919	906.9	133.3	-34.9
20.00	0.60	-0.27	-0.05	.29	.71	.57	864	905.1	131.1	-32.7
21.00	0.61	-0.29	-0.05	.27	.73	.61	854	903.2	129.0	-30.4
22.00	0.64	-0.31	-0.05	.28	.71	.59	869	901.2	126.9	-28.2
23.00	0.68	-0.33	-0.06	.30	.68	.57	891	899.2	124.8	-25.9
24.00	0.69	-0.34	-0.06	.29	.70	.58	883	897.0	122.7	-23.7

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40425.00	0.72	-0.35	-0.06	.30	-17.69	-17.57	893	894.8	120.6	-21.4
26.00	0.72	-0.36	-0.06	.30	.68	.57	898	892.6	118.6	-19.2
40426.50	0.74	-0.36	-0.06	.32	-17.65	-17.54	915	891.5	117.5	-18.0
27.00	0.73	-0.36	-0.06	.30	.68	.57	903	890.3	116.5	-16.9
27.50	0.76	-0.36	-0.06	.34	.62	.51	934	889.2	115.4	-15.8
28.00	0.82	-0.36	-0.06	.40	.55	.44	970	888.0	114.4	-14.6
28.50	0.86	-0.35	-0.07	.44	.51	.40	987	886.9	113.3	-13.5
29.00	0.92	-0.34	-0.07	.51	.45	.33	1015	885.7	112.3	-12.4
29.50	0.87	-0.33	-0.07	.48	.47	.35	1004	884.6	111.3	-11.2
30.00	0.86	-0.31	-0.07	.48	.47	.36	1006	883.4	110.2	-10.1
30.50	0.84	-0.29	-0.07	.48	.46	.36	1009	882.3	109.2	-9.0
31.00	0.79	-0.26	-0.07	.47	.47	.37	1007	881.2	108.1	-7.8
31.50	0.74	-0.22	-0.07	.46	.47	.38	1003	880.0	107.1	-6.7
32.00	0.75	-0.16	-0.07	.52	.42	.32	1027	878.9	106.0	-5.5
32.50	0.73	-0.07	-0.07	.59	.36	.26	1050	877.8	105.0	-4.4
33.00	0.70	0.00	-0.07	.64	.32	.22	1065	876.7	104.0	-3.3
33.50	0.73	0.00	-0.07	.67	.29	.20	1075	875.6	102.9	-2.1
34.00	0.74	0.00	-0.07	.67	.29	.20	1075	874.6	101.9	-1.0
34.50	0.82	0.00	-0.07	.76	.23	.14	1098	873.5	100.8	0.2
35.00	0.96	0.00	-0.07	.89	.16	.07	1125	872.5	99.8	1.3
35.50	1.00	0.00	-0.07	.94	.13	.04	1136	871.5	98.7	2.5
36.00	1.05	0.00	-0.07	.98	.10	.01	1146	870.6	97.7	3.6
36.50	1.51	0.00	-0.06	1.45	-16.91	-16.83	1216	869.6	96.6	4.8
37.00	1.58	0.00	-0.06	1.51	.88	.80	1227	868.7	95.5	5.9
37.50	1.61	0.00	-0.06	1.54	.87	.79	1231	867.8	94.5	7.0
38.00	1.56	0.00	-0.06	1.49	.88	.81	1224	866.9	93.4	8.2
38.50	1.48	0.00	-0.06	1.42	.90	.83	1216	866.1	92.4	9.3
39.00	1.45	0.00	-0.06	1.39	.91	.84	1212	865.3	91.3	10.5
39.50	1.49	0.00	-0.06	1.43	.89	.83	1215	864.5	90.2	11.6
40.00	1.62	0.00	-0.06	1.56	.85	.80	1229	863.8	89.2	12.8
40.50	1.66	0.00	-0.06	1.60	.84	.78	1233	863.1	88.1	13.9
41.00	1.75	0.00	-0.06	1.69	.81	.76	1243	862.4	87.0	15.0
41.50	1.76	0.00	-0.06	1.70	.81	.76	1244	861.3	85.9	16.2
42.00	1.74	0.00	-0.06	1.68	.81	.76	1243	861.2	84.8	17.3
42.50	1.67	0.00	-0.05	1.61	.82	.78	1234	860.6	83.7	18.5
43.00	1.49	0.00	-0.05	1.43	.88	.83	1212	860.1	82.6	19.6
43.50	1.41	0.00	-0.05	1.36	.90	.86	1203	859.6	81.5	20.8
44.00	1.30	0.00	-0.05	1.25	.94	.90	1186	859.2	80.4	21.9
44.50	1.23	0.00	-0.05	1.18	.97	.93	1174	858.8	79.3	23.1
45.00	1.30	0.00	-0.05	1.26	.93	.89	1187	858.4	78.2	24.2
45.50	1.33	0.00	-0.04	1.29	.91	.87	1195	858.1	77.1	25.3
46.00	1.33	0.00	-0.04	1.29	.91	.87	1195	857.8	75.9	26.5
46.50	1.09	0.00	-0.04	1.05	-17.00	.97	1157	857.6	74.8	27.6
47.00	0.95	0.00	-0.04	.91	.07	-17.04	1132	857.4	73.6	28.8
47.50	0.87	0.00	-0.04	.83	.11	.08	1117	857.2	72.5	29.9
48.00	0.79	0.00	-0.03	.75	.15	.13	1098	857.1	71.3	31.1
48.50	0.79	0.00	-0.03	.75	.16	.13	1097	857.0	70.1	32.2
49.00	0.78	0.00	-0.03	.76	.15	.12	1099	857.0	68.9	33.3
49.50	0.70	0.00	-0.03	.68	.20	.17	1080	857.0	67.7	34.5
50.00	0.70	0.00	-0.02	.68	.20	.17	1080	857.0	66.5	35.6
50.50	0.68	0.00	-0.02	.66	.21	.18	1075	857.1	65.3	36.8
51.00	0.63	0.00	-0.02	.61	.25	.22	1061	857.2	64.0	37.9
51.50	0.63	0.00	-0.02	.61	.25	.22	1060	857.4	62.7	39.0
52.00	0.64	0.00	-0.02	.62	.24	.21	1062	857.6	61.4	40.2
52.50	0.59	0.00	-0.01	.58	.27	.24	1051	857.8	60.1	41.3
53.00	0.60	0.00	-0.01	.59	.26	.23	1054	858.1	58.8	42.5
53.50	0.61	0.00	-0.01	.60	.26	.22	1055	858.4	57.5	43.6
54.00	0.57	0.00	-0.01	.57	.28	.25	1045	858.7	56.1	44.7
54.50	0.59	0.00	0.00	.58	.28	.24	1047	859.1	54.7	45.8

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40455.00	0.66	0.00	0.00	.66	-17.22	-17.18	1068	859.5	53.3	47.0
55.50	0.65	0.00	0.00	.66	.22	.18	1067	859.9	51.8	48.1
56.00	0.68	0.00	0.00	.68	.20	.16	1073	860.4	50.3	49.2
56.50	0.71	0.00	0.01	.71	.18	.14	1081	860.9	48.7	50.4
57.00	0.82	0.00	0.01	.83	.12	.07	1105	861.5	47.1	51.5
57.50	0.83	0.00	0.01	.84	.11	.06	1106	862.1	45.5	52.6
58.00	0.87	0.00	0.01	.88	.09	.04	1114	862.7	43.8	53.7
58.50	0.93	0.00	0.01	.95	.06	.01	1125	863.3	42.1	54.8
59.00	0.98	0.00	0.02	1.00	.05	-16.99	1131	864.0	40.2	55.9
59.50	1.14	0.00	0.02	1.16	-16.98	.91	1158	864.6	38.4	57.0
60.00	1.80	0.00	0.02	1.82	.77	.71	1238	865.4	36.4	58.1
60.50	1.57	0.00	0.02	1.60	.83	.76	1214	866.1	34.3	59.2
61.00	1.48	0.00	0.03	1.50	.87	.80	1200	866.9	32.1	60.3
61.50	1.44	0.00	0.03	1.47	.88	.81	1194	867.7	29.8	61.3
62.00	1.20	0.00	0.03	1.23	.97	.89	1162	868.5	27.4	62.4
62.50	1.28	0.00	0.03	1.31	.94	.86	1171	869.3	24.8	63.4
63.00	1.42	0.04	0.03	1.49	.89	.81	1191	870.2	22.0	64.4
63.50	1.51	0.10	0.04	1.65	.85	.77	1207	871.1	19.0	65.4
64.00	1.21	0.16	0.04	1.41	.92	.83	1179	872.0	15.8	66.4
64.50	1.21	0.21	0.04	1.46	.91	.82	1183	872.9	12.4	67.4
65.00	1.13	0.26	0.04	1.43	.93	.83	1178	873.9	8.6	68.3
65.50	1.03	0.31	0.04	1.39	.95	.85	1171	874.8	4.5	69.2
66.00	0.97	0.35	0.05	1.37	.96	.86	1166	875.8	0.1	70.0
66.50	0.89	0.38	0.05	1.32	.98	.88	1158	876.8	355.2	70.8
67.00	0.84	0.41	0.05	1.31	.99	.89	1155	877.8	349.9	71.5
67.50	0.76	0.44	0.05	1.26	-17.01	.90	1148	878.8	344.2	72.2
68.00	0.72	0.47	0.05	1.24	.02	.91	1144	879.9	338.0	72.8
68.50	0.65	0.49	0.05	1.20	.04	.92	1137	880.9	331.5	73.3
69.00	0.74	0.51	0.06	1.31	.00	.89	1151	881.9	324.6	73.7
69.50	0.76	0.53	0.06	1.35	-16.99	.87	1155	883.0	317.5	74.0
70.00	0.78	0.55	0.06	1.39	.98	.85	1160	884.1	310.4	74.2
70.50	0.81	0.57	0.06	1.44	.97	.84	1164	885.1	303.3	74.2
71.00	0.41	0.58	0.06	1.05	-17.11	.98	1107	886.2	296.4	74.2
71.50	0.26	0.60	0.06	.91	.18	-17.05	1081	887.3	289.9	74.1
72.00	0.24	0.61	0.06	.91	.18	.05	1079	888.4	283.7	73.8
72.50	0.41	0.62	0.06	1.09	.11	-16.97	1110	889.5	278.0	73.5
73.00	0.29	0.63	0.06	.98	.16	-17.02	1091	890.5	272.8	73.2
73.50	-0.06	0.64	0.06	.65	.34	.20	1013	891.6	268.0	72.7
74.00	-0.13	0.65	0.07	.59	.38	.25	991	892.7	263.5	72.2
74.50	-0.12	0.66	0.07	.60	.37	.24	997	893.8	259.5	71.7
75.00	-0.13	0.66	0.07	.60	.37	.24	995	894.8	255.7	71.2
75.50	-0.10	0.67	0.07	.63	.36	.22	1002	895.9	252.3	70.6
76.00	-0.18	0.67	0.07	.56	.41	.27	977	896.9	249.1	69.9
76.50	-0.20	0.67	0.07	.54	.42	.29	969	898.0	246.2	69.3
77.00	-0.19	0.67	0.07	.55	.41	.28	975	899.0	243.4	68.6
77.50	-0.21	0.68	0.07	.54	.42	.29	971	900.0	240.8	67.9
78.00	-0.17	0.68	0.07	.58	.39	.26	983	901.0	238.4	67.3
78.50	-0.13	0.68	0.07	.62	.37	.23	993	902.0	236.1	66.5
79.00	-0.11	0.68	0.07	.64	.37	.21	990	903.0	234.0	65.8
79.50	0.02	0.67	0.07	.76	.30	.13	1022	903.9	231.9	65.1
80.00	-0.01	0.67	0.07	.73	.32	.15	1014	904.9	229.9	64.4
80.50	-0.07	0.67	0.07	.67	.35	.19	997	905.8	228.1	63.6
81.00	-0.10	0.67	0.07	.64	.37	.22	990	906.7	226.3	62.9
81.50	-0.10	0.67	0.07	.64	.37	.21	986	907.5	224.5	62.1
82.00	-0.04	0.66	0.07	.69	.34	.18	996	908.4	222.8	61.3
82.50	0.02	0.65	0.07	.74	.32	.14	1008	909.2	221.2	60.6
83.00	0.00	0.65	0.07	.71	.34	.16	997	910.0	219.6	59.8
83.50	-0.05	0.64	0.07	.66	.37	.19	982	910.8	218.1	59.0
84.00	-0.04	0.64	0.07	.67	.35	.19	989	911.5	216.6	58.2
84.50	-0.08	0.63	0.07	.62	.39	.22	968	912.3	215.2	57.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40485.00	-0.12	0.62	0.07	.57	-17.42	-17.26	947	913.0	213.8	56.7
85.50	-0.08	0.62	0.07	.60	.40	.24	961	913.6	212.4	55.9
86.00	-0.09	0.61	0.07	.58	.41	.25	952	914.3	211.0	55.1
86.50	-0.10	0.60	0.06	.56	.43	.27	943	914.9	209.7	54.3
87.00	-0.03	0.59	0.06	.63	.37	.22	971	915.4	208.4	53.5
87.50	-0.04	0.58	0.06	.61	.39	.23	959	916.0	207.1	52.7
88.00	0.01	0.58	0.06	.65	.37	.20	966	916.5	205.8	51.9
88.50	0.06	0.56	0.06	.68	.35	.18	974	917.0	204.5	51.1
89.00	0.08	0.55	0.06	.69	.35	.17	976	917.4	203.3	50.3
89.50	0.10	0.54	0.06	.70	.35	.17	974	917.8	202.1	49.4
90.00	0.07	0.53	0.06	.66	.37	.19	956	918.2	200.9	48.6
90.50	0.07	0.52	0.05	.64	.38	.21	949	918.6	199.7	47.8
91.00	0.07	0.51	0.05	.63	.39	.21	946	918.9	198.5	47.0
91.50	0.09	0.49	0.05	.64	.38	.21	950	919.2	197.4	46.2
92.00	0.12	0.48	0.05	.65	.38	.20	947	919.5	196.2	45.4
92.50	0.53	0.47	0.05	1.04	.19	-16.99	1043	919.7	195.1	44.6
93.00	0.70	0.46	0.04	1.20	.13	.92	1070	919.9	193.9	43.7
93.50	0.48	0.44	0.04	.97	.22	-17.01	1023	920.0	192.8	42.9
94.00	0.74	0.43	0.04	1.21	.13	-16.91	1064	920.2	191.7	42.1
94.50	0.68	0.41	0.04	1.14	.16	.93	1050	920.3	190.6	41.3
95.00	0.47	0.40	0.04	.91	.24	-17.04	1005	920.3	189.5	40.4
95.50	0.20	0.39	0.04	.62	.40	.22	917	920.4	188.4	39.6
96.00	0.17	0.37	0.03	.58	.43	.24	900	920.4	187.3	38.8
96.50	0.11	0.36	0.03	.51	.49	.30	861	920.4	186.2	38.0
97.00	0.17	0.35	0.03	.54	.46	.28	876	920.3	185.1	37.1
97.50	0.25	0.33	0.03	.60	.41	.23	905	920.3	184.1	36.3
98.00	0.22	0.31	0.02	.56	.44	.26	888	920.2	183.0	35.5
98.50	0.22	0.30	0.02	.54	.45	.28	881	920.0	181.9	34.6
40499.00	0.24	0.28	0.02	.54	-17.44	-17.28	882	919.9	180.9	33.8
40500.00	0.27	0.25	0.02	.54	.44	.28	878	919.5	178.8	32.1
01.00	0.30	0.22	0.01	.53	.45	.29	868	919.0	176.7	30.5
02.00	0.35	0.19	0.01	.55	.43	.27	881	918.4	174.6	28.8
03.00	0.41	0.16	0.00	.57	.41	.26	890	917.7	172.6	27.1
04.00	0.46	0.12	0.00	.58	.41	.25	885	917.0	170.5	25.4
05.00	0.55	0.09	0.00	.64	.37	.20	905	916.1	168.4	23.7
06.00	0.53	0.05	-0.01	.58	.41	.25	884	915.2	166.4	22.0
07.00	0.51	0.02	-0.02	.52	.45	.29	861	914.3	164.4	20.3
08.00	0.52	-0.01	-0.02	.49	.46	.32	851	913.2	162.3	18.6
09.00	0.54	-0.05	-0.03	.47	.48	.34	842	912.1	160.3	16.9
10.00	0.57	-0.08	-0.03	.46	.49	.35	836	910.9	158.2	15.2
11.00	0.63	-0.11	-0.03	.48	.46	.33	848	909.7	156.2	13.5
12.00	0.69	-0.14	-0.04	.51	.44	.30	861	908.4	154.2	11.8
13.00	0.77	-0.18	-0.04	.55	.41	.27	876	907.0	152.1	10.1
14.00	0.83	-0.21	-0.05	.58	.39	.24	889	905.7	150.1	8.4
15.00	0.91	-0.24	-0.05	.63	.36	.21	908	904.2	148.1	6.7
16.00	1.02	-0.27	-0.05	.70	.32	.15	929	902.8	146.0	4.9
17.00	1.14	-0.30	-0.06	.79	.26	.10	959	901.3	144.0	3.2
18.00	1.26	-0.33	-0.06	.88	.21	.05	983	899.8	141.9	1.5
40518.50	1.32	-0.34	-0.06	.92	-17.19	-17.02	994	899.0	140.9	0.6
19.00	1.37	-0.35	-0.06	.95	.17	.00	1002	898.3	139.8	-0.2
19.50	1.41	-0.36	-0.07	.98	.16	-16.99	1009	897.5	138.8	-1.1
20.00	1.46	-0.38	-0.07	1.02	.14	.97	1018	896.7	137.8	-2.0
20.50	1.54	-0.39	-0.07	1.08	.11	.95	1030	895.9	136.7	-2.8
21.00	1.66	-0.40	-0.07	1.19	.07	.90	1049	895.2	135.7	-3.7
21.50	1.74	-0.41	-0.07	1.26	.04	.87	1061	894.4	134.6	-4.6
22.00	1.77	-0.42	-0.07	1.27	.03	.86	1065	893.6	133.6	-5.4
22.50	1.74	-0.44	-0.07	1.23	.04	.88	1060	892.8	132.5	-6.3
23.00	1.74	-0.45	-0.07	1.22	.04	.88	1059	892.1	131.5	-7.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40523.50	1.69	-0.45	-0.08	1.16	-17.06	-16.91	1051	891.3	130.4	-8.0
24.00	1.69	-0.46	-0.08	1.15	.06	.91	1050	890.5	129.4	-8.9
24.50	1.68	-0.47	-0.08	1.13	.06	.92	1048	889.8	128.3	-9.8
25.00	1.62	-0.47	-0.08	1.07	.09	.95	1040	889.0	127.2	-10.6
25.50	1.63	-0.48	-0.08	1.08	.08	.94	1043	888.3	126.2	-11.5
26.00	1.65	-0.48	-0.08	1.09	.07	.93	1046	887.5	125.1	-12.4
26.50	1.63	-0.48	-0.08	1.07	.07	.95	1044	886.8	124.0	-13.2
27.00	1.62	-0.49	-0.08	1.05	.08	.95	1042	886.1	122.9	-14.1
27.50	1.66	-0.49	-0.08	1.09	.06	.93	1050	885.4	121.8	-15.0
28.00	1.64	-0.48	-0.08	1.07	.06	.93	1049	884.7	120.7	-15.9
28.50	1.65	-0.48	-0.08	1.08	.05	.92	1053	884.0	119.6	-16.7
29.00	1.60	-0.47	-0.08	1.05	.06	.94	1049	883.4	118.5	-17.6
29.50	1.61	-0.47	-0.08	1.06	.06	.94	1052	882.7	117.4	-18.5
30.00	1.56	-0.46	-0.08	1.02	.07	.96	1047	882.1	116.3	-19.3
30.50	1.54	-0.44	-0.08	1.02	.07	.95	1048	881.5	115.2	-20.2
31.00	1.47	-0.43	-0.08	.96	.09	.98	1039	880.9	114.0	-21.1
31.50	1.39	-0.41	-0.08	.91	.11	-17.00	1032	880.4	112.9	-22.0
32.00	1.48	-0.39	-0.08	1.01	.06	-16.95	1052	879.8	111.7	-22.6
32.50	1.56	-0.36	-0.08	1.13	.00	.89	1074	879.3	110.6	-23.7
33.00	1.57	-0.32	-0.08	1.17	-16.98	.87	1082	878.8	109.4	-24.6
33.50	1.68	-0.28	-0.08	1.33	.92	.81	1106	878.3	108.2	-25.4
34.00	1.77	-0.22	-0.08	1.47	.87	.75	1125	877.9	107.0	-26.3
34.50	1.78	-0.16	-0.08	1.54	.83	.72	1139	877.5	105.8	-27.2
35.00	1.73	0.00	-0.08	1.66	.80	.69	1152	877.1	104.6	-28.1
35.50	1.35	0.00	-0.07	1.27	.91	.80	1109	876.7	103.4	-28.9
36.00	1.04	0.00	-0.07	.97	-17.03	.92	1067	876.4	102.1	-29.8
36.50	0.89	0.00	-0.07	.82	.11	-17.00	1037	876.1	100.9	-30.7
37.00	0.93	0.00	-0.07	.86	.08	-16.98	1046	875.8	99.6	-31.6
37.50	1.00	0.00	-0.07	.93	.05	.95	1060	875.6	98.3	-32.4
38.00	1.10	0.00	-0.07	1.03	.01	.91	1077	875.4	97.0	-33.3
38.50	1.06	0.00	-0.07	1.00	.02	.92	1075	875.2	95.7	-34.2
39.00	1.06	0.00	-0.07	.99	.02	.92	1075	875.1	94.4	-35.0
39.50	1.03	0.00	-0.06	.97	.03	.93	1073	874.9	93.0	-35.9
40.00	1.05	0.00	-0.06	.99	.02	.92	1078	874.9	91.6	-36.8
40.50	1.06	0.00	-0.06	.99	.01	.91	1080	874.8	90.2	-37.6
41.00	1.06	0.00	-0.06	1.00	.00	.90	1084	874.8	88.7	-38.5
41.50	1.14	0.00	-0.06	1.09	-16.96	.86	1100	874.9	87.3	-39.4
42.00	1.21	0.00	-0.05	1.15	.93	.83	1112	875.0	85.8	-40.2
42.50	1.30	0.00	-0.05	1.24	.90	.79	1126	875.1	84.2	-41.1
43.00	1.34	0.00	-0.05	1.29	.88	.77	1135	875.2	82.6	-41.9
43.50	1.44	0.00	-0.05	1.39	.84	.73	1151	875.4	81.0	-42.8
44.00	1.51	0.00	-0.05	1.46	.81	.70	1162	875.6	79.3	-43.6
44.50	1.53	0.00	-0.04	1.49	.80	.68	1169	875.9	77.6	-44.5
45.00	1.56	0.00	-0.04	1.52	.78	.66	1176	876.1	75.8	-45.3
45.50	1.57	0.00	-0.04	1.53	.78	.66	1179	876.5	73.9	-46.2
46.00	1.63	0.00	-0.04	1.59	.77	.65	1184	876.8	72.0	-47.0
46.50	1.67	0.00	-0.03	1.64	.75	.63	1190	877.2	70.0	-47.8
47.00	1.74	0.00	-0.03	1.71	.73	.61	1200	877.7	67.9	-48.7
47.50	1.76	0.00	-0.03	1.74	.72	.59	1206	878.2	65.7	-49.5
48.00	1.79	0.00	-0.02	1.76	.71	.59	1210	878.7	63.3	-50.3
48.50	1.82	0.00	-0.02	1.80	.71	.58	1214	879.2	60.9	-51.1
49.00	1.85	0.00	-0.02	1.84	.70	.57	1218	879.8	58.2	-51.8
49.50	1.87	0.00	-0.02	1.85	.70	.56	1221	880.4	55.5	-52.6
50.00	1.91	0.00	-0.01	1.90	.69	.55	1227	881.1	52.5	-53.4
50.50	1.96	0.00	-0.01	1.95	.68	.54	1231	881.8	49.3	-54.1
51.00	2.04	0.00	-0.01	2.03	.67	.53	1238	882.5	45.8	-54.8
51.50	2.05	0.00	0.00	2.04	.68	.75	1238	883.2	42.1	-55.4
52.00	2.07	0.00	0.00	2.06	.68	.75	1240	884.0	38.0	-56.1
52.50	2.37	0.00	0.00	2.38	.62	.68	1267	884.9	33.6	-56.7
53.00	2.02	0.00	0.00	2.03	.69	.75	1240	885.7	28.8	-57.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40553.50	1.91	0.00	0.01	1.92	-16.73	-16.79	1228	886.6	23.5	-57.7
54.00	1.78	0.00	0.01	1.79	.77	.82	1215	887.5	17.8	-58.2
54.50	1.75	0.00	0.01	1.77	.78	.83	1213	888.5	11.6	-58.5
55.00	2.10	0.00	0.02	2.11	.71	.75	1244	889.5	5.0	-58.8
55.50	1.89	0.00	0.02	1.91	.76	.80	1226	890.5	358.0	-58.9
56.00	1.55	0.00	0.02	1.57	.86	.89	1190	891.5	350.8	-59.0
56.50	1.37	0.00	0.03	1.40	.92	.95	1170	892.6	343.4	-59.0
57.00	1.22	0.00	0.03	1.25	.98	-17.01	1150	893.7	336.1	-58.8
57.50	1.15	0.00	0.03	1.19	-17.01	.03	1142	894.8	329.0	-58.5
58.00	1.09	0.00	0.03	1.12	.04	.06	1133	896.0	322.2	-58.1
58.50	1.10	0.00	0.04	1.14	.04	.05	1136	897.2	315.8	-57.7
59.00	1.17	0.00	0.04	1.21	.02	.03	1146	898.4	309.8	-57.1
59.50	1.32	0.00	0.04	1.36	-16.97	-16.98	1167	899.6	304.3	-56.5
60.00	1.36	0.00	0.05	1.41	.96	.96	1173	900.8	299.3	-55.8
60.50	1.44	0.00	0.05	1.49	.94	.94	1183	902.1	294.6	-55.1
61.00	1.88	0.00	0.05	1.94	.83	.81	1230	903.4	290.4	-54.3
61.50	1.40	0.00	0.06	1.46	.96	.94	1183	904.7	286.5	-53.5
62.00	0.69	0.06	0.06	.80	-17.24	-17.21	1084	906.0	282.9	-52.6
62.50	0.56	0.14	0.06	.76	.27	.24	1073	907.3	279.5	-51.7
63.00	0.51	0.21	0.06	.78	.27	.24	1077	908.7	276.4	-50.8
63.50	0.46	0.27	0.07	.79	.27	.23	1079	910.0	273.6	-49.9
64.00	0.41	0.31	0.07	.79	.28	.24	1079	911.4	270.8	-49.0
64.50	0.34	0.35	0.07	.76	.30	.26	1073	912.8	268.3	-48.1
65.00	0.21	0.39	0.07	.68	.35	.31	1055	914.2	265.9	-47.1
65.50	0.14	0.42	0.08	.64	.39	.34	1046	915.6	263.6	-46.1
66.00	0.10	0.45	0.08	.63	.40	.34	1041	917.0	261.4	-45.2
66.50	0.06	0.48	0.08	.62	.41	.35	1038	918.4	259.3	-44.2
67.00	0.05	0.50	0.08	.64	.41	.34	1045	919.9	257.3	-43.2
67.50	0.06	0.53	0.09	.68	.39	.32	1057	921.3	255.4	-42.2
68.00	0.06	0.55	0.09	.69	.38	.31	1061	922.7	253.6	-41.2
68.50	-0.01	0.57	0.09	.65	.41	.34	1052	924.1	251.8	-40.2
69.00	-0.04	0.58	0.09	.63	.43	.36	1047	925.6	250.0	-39.2
69.50	-0.07	0.59	0.09	.62	.45	.37	1043	927.0	248.4	-38.2
70.00	-0.10	0.61	0.10	.60	.47	.38	1035	928.4	246.7	-37.2
70.50	-0.13	0.62	0.10	.59	.48	.39	1032	929.8	245.1	-36.2
71.00	-0.02	0.63	0.10	.71	.41	.31	1064	931.2	243.6	-35.1
71.50	0.03	0.64	0.10	.77	.38	.28	1078	932.6	242.0	-34.1
72.00	-0.08	0.65	0.10	.68	.44	.33	1056	934.0	240.5	-33.1
72.50	-0.15	0.66	0.10	.61	.49	.38	1038	935.4	239.1	-32.1
73.00	-0.17	0.67	0.10	.59	.51	.40	1033	936.7	237.6	-31.1
73.50	-0.22	0.67	0.10	.55	.54	.43	1019	938.1	236.2	-30.1
74.00	-0.24	0.67	0.11	.54	.56	.44	1017	939.4	234.8	-29.0
74.50	-0.29	0.68	0.11	.50	.59	.47	1001	940.7	233.4	-28.0
75.00	-0.25	0.68	0.11	.54	.56	.44	1016	942.0	232.1	-27.0
75.50	-0.22	0.68	0.11	.58	.54	.41	1032	943.3	230.7	-26.0
76.00	-0.20	0.69	0.11	.59	.53	.41	1034	944.6	229.4	-25.0
76.50	-0.17	0.69	0.11	.63	.51	.38	1047	945.8	228.1	-23.9
77.00	-0.07	0.69	0.11	.72	.46	.32	1072	947.0	226.8	-22.9
77.50	-0.06	0.69	0.11	.74	.46	.31	1073	948.2	225.5	-21.9
78.00	-0.07	0.69	0.11	.73	.47	.31	1068	949.4	224.3	-20.9
78.50	-0.02	0.68	0.11	.77	.45	.29	1078	950.5	223.0	-19.9
79.00	-0.09	0.68	0.11	.70	.50	.33	1059	951.6	221.8	-18.9
79.50	-0.23	0.68	0.11	.56	.59	.43	1015	952.7	220.5	-17.8
80.00	-0.13	0.67	0.11	.66	.52	.36	1050	953.7	219.3	-16.8
80.50	-0.18	0.67	0.11	.59	.57	.41	1027	954.8	218.1	-15.8
81.00	-0.14	0.66	0.11	.64	.54	.38	1044	955.7	216.9	-14.8
81.50	-0.22	0.66	0.11	.55	.61	.45	1014	956.7	215.7	-13.8
82.00	-0.19	0.65	0.11	.57	.60	.43	1018	957.6	214.5	-12.8
82.50	-0.25	0.64	0.11	.51	.65	.48	994	958.5	213.3	-11.8
83.00	-0.30	0.64	0.11	.45	.69	.54	972	959.3	212.1	-10.8

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40583.50	-0.30	0.63	0.11	.44	-17.69	-17.55	972	960.1	210.9	-9.8
84.00	-0.32	0.62	0.11	.41	.73	.58	951	960.9	209.7	-8.8
84.50	-0.32	0.61	0.11	.40	.75	.59	942	961.6	208.6	-7.8
85.00	-0.32	0.60	0.11	.39	.75	.60	938	962.3	207.4	-6.8
85.50	-0.34	0.60	0.11	.36	.79	.64	919	963.0	206.3	-5.8
86.00	-0.31	0.59	0.11	.38	.76	.61	931	963.6	205.1	-4.7
86.50	-0.30	0.58	0.11	.38	.77	.61	929	964.2	204.0	-3.8
87.00	-0.35	0.57	0.10	.32	.85	.69	880	964.7	202.8	-2.8
87.50	-0.37	0.55	0.10	.29	.89	.73	848	965.2	201.7	-1.8
88.00	-0.23	0.54	0.10	.42	.74	.57	939	965.6	200.5	-0.8
88.50	0.13	0.53	0.10	.76	.50	.31	1067	966.0	199.4	0.2
89.00	-0.05	0.52	0.10	.58	.61	.43	1006	966.3	198.3	1.2
89.50	-0.17	0.51	0.10	.44	.72	.55	946	966.6	197.2	2.2
90.00	-0.24	0.50	0.10	.36	.79	.64	904	966.9	196.0	3.2
90.50	-0.25	0.48	0.10	.33	.82	.67	887	967.1	194.9	4.2
91.00	-0.29	0.47	0.09	.27	.90	.76	834	967.2	193.8	5.2
91.50	-0.30	0.46	0.09	.25	.94	.79	810	967.3	192.7	6.2
92.00	-0.32	0.45	0.09	.22	.99	.85	768	967.4	191.6	7.1
92.50	-0.27	0.44	0.09	.25	.93	.79	806	967.4	190.5	8.1
93.00	-0.29	0.42	0.09	.23	.96	.82	788	967.3	189.4	9.1
93.50	-0.22	0.41	0.09	.28	.87	.73	842	967.3	188.2	10.1
94.00	-0.17	0.39	0.08	.31	.83	.69	866	967.1	187.1	11.1
94.50	-0.15	0.38	0.08	.31	.83	.69	863	966.9	186.0	12.0
95.00	-0.06	0.37	0.08	.39	.73	.59	920	966.7	184.9	13.0
95.50	-0.12	0.35	0.08	.32	.81	.68	865	966.4	183.8	14.0
96.00	-0.10	0.34	0.08	.32	.81	.67	863	966.1	182.7	14.9
96.50	-0.13	0.33	0.08	.27	.88	.75	816	965.7	181.7	15.9
97.00	-0.11	0.31	0.07	.28	.86	.73	827	965.3	180.6	16.9
97.50	-0.09	0.30	0.07	.28	.86	.73	823	964.8	179.5	17.8
98.00	-0.02	0.29	0.07	.34	.79	.65	865	964.3	178.4	18.8
98.50	0.11	0.27	0.07	.46	.66	.52	937	963.8	177.3	19.8
99.00	0.11	0.26	0.07	.44	.68	.54	921	963.2	176.2	20.7
99.50	0.13	0.24	0.07	.44	.68	.54	916	962.6	175.1	21.7
40600.00	0.16	0.23	0.06	.45	.67	.53	920	961.9	174.0	22.6
00.50	0.23	0.21	0.06	.51	.61	.47	951	961.2	172.9	23.6
01.00	0.26	0.20	0.06	.51	.61	.47	947	960.4	171.8	24.6
01.50	0.25	0.18	0.06	.50	.62	.48	938	959.6	170.7	25.5
02.00	0.36	0.17	0.06	.58	.55	.41	976	958.8	169.7	26.5
02.50	0.44	0.15	0.05	.65	.50	.36	998	957.9	168.6	27.4
03.00	0.59	0.14	0.05	.79	.42	.28	1039	957.0	167.5	28.3
03.50	0.70	0.12	0.05	.87	.37	.23	1066	956.1	166.4	29.3
04.00	0.52	0.11	0.05	.67	.47	.34	1006	955.1	165.3	30.2
04.50	0.46	0.10	0.05	.60	.51	.39	975	954.1	164.2	31.2
05.00	0.44	0.08	0.04	.56	.54	.42	958	953.1	163.1	32.1
05.50	0.46	0.06	0.04	.57	.52	.41	963	952.0	162.0	33.0
06.00	0.52	0.05	0.04	.61	.49	.37	976	950.9	161.0	34.0
06.50	0.60	0.03	0.04	.67	.45	.33	998	949.8	159.9	34.9
07.00	0.52	0.02	0.03	.58	.50	.39	960	948.7	158.8	35.8
07.50	0.55	0.01	0.03	.59	.49	.38	964	947.5	157.7	36.8
08.00	0.58	-0.01	0.03	.60	.48	.37	966	946.4	156.6	37.7
08.50	0.50	-0.02	0.03	.51	.54	.44	924	945.2	155.5	38.6
09.00	0.56	-0.03	0.03	.55	.50	.40	943	944.0	154.4	39.5
09.50	0.58	-0.05	0.02	.56	.49	.39	947	942.7	153.3	40.5
10.00	0.56	-0.06	0.02	.52	.51	.42	928	941.5	152.2	41.4
40611.00	0.55	-0.09	0.02	.48	-17.53	-17.45	907	939.0	150.0	43.2
12.00	0.55	-0.11	0.01	.46	.54	.46	896	936.4	147.8	45.0
13.00	0.58	-0.13	0.01	.45	.54	.47	886	933.8	145.6	46.8
14.00	0.61	-0.16	0.01	.46	.52	.45	886	931.2	143.3	48.6
15.00	0.64	-0.18	0.00	.46	.52	.45	882	928.6	141.1	50.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40616.00	0.67	-0.20	0.00	.46	-17.51	-17.45	878	926.0	138.8	52.2
17.00	0.72	-0.22	0.00	.49	.47	.42	893	923.4	136.5	54.0
18.00	0.71	-0.24	-0.01	.46	.48	.44	878	920.8	134.2	55.7
19.00	0.76	-0.26	-0.01	.49	.45	.40	894	918.2	131.8	57.5
20.00	0.82	-0.28	-0.01	.54	.39	.36	918	915.7	129.5	59.2
21.00	0.79	-0.29	-0.01	.49	.42	.39	894	913.2	127.1	61.0
22.00	0.82	-0.30	-0.02	.51	.39	.37	906	910.7	124.6	62.7
23.00	0.84	-0.31	-0.02	.52	.37	.35	912	908.4	122.1	64.4
24.00	0.84	-0.31	-0.02	.51	.36	.35	910	906.0	119.6	66.1
25.00	0.90	-0.30	-0.02	.58	.30	.29	943	903.8	116.9	67.8
40625.50	0.92	-0.30	-0.02	.60	-17.28	-17.28	951	902.7	115.6	68.7
26.00	0.94	-0.29	-0.02	.62	.27	.26	958	901.7	114.2	69.5
26.50	0.96	-0.29	-0.02	.65	.24	.24	969	900.6	112.8	70.3
27.00	1.05	-0.27	-0.02	.76	.17	.17	1008	899.6	111.4	71.2
27.50	1.13	-0.26	-0.02	.85	.12	.12	1034	898.6	110.0	72.0
28.00	1.20	-0.23	-0.02	.94	.07	.08	1057	897.6	108.5	72.8
28.50	1.03	-0.21	-0.02	.80	.14	.15	1019	896.7	107.0	73.6
29.00	0.97	-0.17	-0.03	.77	.15	.16	1011	895.8	105.5	74.4
29.50	1.02	-0.13	-0.03	.86	.10	.12	1037	894.9	103.9	75.2
30.00	1.09	-0.08	-0.03	.98	.04	.04	1067	894.0	102.3	76.0
30.50	1.16	-0.02	-0.03	1.11	-16.99	.01	1095	893.2	100.6	76.8
31.00	1.21	0.00	-0.03	1.18	.95	-16.98	1109	892.4	98.9	77.6
31.50	1.38	0.00	-0.03	1.36	.89	.92	1139	891.7	97.1	78.4
32.00	1.24	0.00	-0.03	1.22	.93	.96	1116	891.0	95.3	79.2
32.50	1.13	0.00	-0.03	1.10	.98	-17.01	1094	890.3	93.3	80.0
33.00	1.15	0.00	-0.03	1.12	.97	.00	1098	889.6	91.3	80.7
33.50	1.14	0.00	-0.03	1.11	.97	.00	1096	889.0	89.2	81.5
34.00	1.19	0.00	-0.03	1.16	.95	-16.98	1105	888.4	87.0	82.2
34.50	1.20	0.00	-0.03	1.17	.94	.98	1106	887.9	84.6	83.0
35.00	1.88	0.00	-0.03	1.85	.74	.78	1200	887.4	82.2	83.7
35.50	1.82	0.00	-0.03	1.79	.75	.79	1193	886.9	79.5	84.4
36.00	1.38	0.00	-0.03	1.36	.87	.91	1137	886.5	76.7	85.0
36.50	1.29	0.00	-0.03	1.27	.90	.94	1122	886.2	73.7	85.7
37.00	1.28	0.00	-0.03	1.26	.90	.95	1119	885.8	70.4	86.3
37.50	1.22	0.00	-0.03	1.19	.93	.97	1107	885.5	66.9	86.9
38.00	1.23	0.00	-0.03	1.21	.92	.97	1110	885.3	63.1	87.5
38.50	1.19	0.00	-0.02	1.17	.94	.98	1102	885.1	58.9	88.1
39.00	1.15	0.00	-0.02	1.13	.95	-17.00	1094	884.9	54.4	88.5
39.50	1.11	0.00	-0.02	1.09	.97	.01	1086	884.7	49.4	89.0
40.00	1.13	0.00	-0.02	1.10	.96	.01	1087	884.7	44.0	89.4
40.50	1.16	0.00	-0.02	1.14	.95	.00	1094	884.6	38.2	89.6
41.00	1.25	0.00	-0.02	1.23	.92	-16.97	1109	884.6	31.9	89.9
41.50	1.77	0.00	-0.02	1.75	.77	.81	1180	884.7	25.2	90.0
42.00	1.99	0.00	-0.02	1.97	.72	.76	1203	884.8	18.2	90.0
42.50	1.47	0.00	-0.02	1.45	.85	.90	1141	884.9	11.0	89.9
43.00	1.37	0.00	-0.02	1.35	.88	.93	1125	885.0	3.8	89.7
43.50	1.51	0.00	-0.01	1.49	.84	.89	1145	885.2	356.6	89.4
44.00	1.51	0.00	-0.01	1.50	.84	.89	1145	885.5	349.7	89.0
44.50	1.47	0.00	-0.01	1.45	.86	.90	1137	885.8	343.2	88.4
45.00	1.34	0.00	-0.01	1.33	.90	.94	1120	886.1	337.0	87.8
45.50	1.39	0.00	-0.01	1.39	.88	.93	1129	886.4	331.4	87.1
46.00	1.45	0.00	-0.01	1.44	.87	.91	1135	886.8	326.1	86.4
46.50	1.85	0.00	0.00	1.84	.77	.81	1183	887.3	321.3	85.5
47.00	1.66	0.00	0.00	1.66	.81	.85	1162	887.7	316.9	84.7
47.50	1.45	0.00	0.00	1.45	.88	.92	1134	888.2	312.9	83.7
48.00	1.45	0.00	0.00	1.45	.88	.92	1133	888.8	309.2	82.8
48.50	1.34	0.00	0.00	1.34	.92	.96	1116	889.3	305.8	81.8
49.00	1.28	0.00	0.00	1.28	.94	.98	1106	889.9	302.6	80.8
49.50	1.28	0.00	0.01	1.28	.95	.98	1105	890.6	299.7	79.8

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40650.00	1.22	0.00	0.01	1.22	-16.98	-17.00	1094	891.2	297.0	78.7
50.50	1.31	0.00	0.01	1.32	.95	-16.97	1108	891.9	294.4	77.6
51.00	1.38	0.00	0.01	1.39	.93	.95	1117	892.6	292.0	76.6
51.50	1.40	0.00	0.01	1.41	.93	.95	1119	893.3	289.7	75.5
52.00	1.97	0.00	0.01	1.98	.78	.80	1184	894.1	287.6	74.4
52.50	1.93	0.00	0.01	1.94	.80	.81	1180	894.9	285.5	73.2
53.00	1.47	0.00	0.01	1.48	.92	.93	1127	895.7	283.6	72.1
40653.20	2.09	0.00	0.02	2.11	-16.77	-16.78	1195	896.0	282.8	71.7
53.40	2.09	0.00	0.02	2.10	.77	.78	1193	896.3	282.0	71.2
53.60	2.41	0.00	0.02	2.43	.71	.72	1221	896.7	281.3	70.7
53.80	3.06	0.00	0.02	3.08	.60	.61	1269	897.0	280.6	70.3
54.00	6.36	0.00	0.02	6.37	.26	.27	1429	897.3	279.9	69.8
54.20	4.70	0.00	0.02	4.72	.40	.41	1362	897.7	279.2	69.4
54.40	2.38	0.00	0.02	2.40	.72	.73	1219	898.0	278.5	68.9
54.60	0.39	0.00	0.02	.41	-17.50	-17.50	833	898.4	277.8	68.5
54.80	1.04	0.00	0.02	1.06	.09	.09	1056	898.7	277.1	68.0
55.00	1.70	0.00	0.02	1.72	-16.88	-16.88	1151	899.1	276.5	67.5
55.20	0.53	0.00	0.02	.55	-17.38	-17.38	907	899.4	275.8	67.1
40655.50	0.71	0.00	0.02	.73	-17.26	-17.26	971	900.0	274.8	66.4
56.00	0.77	0.00	0.02	.79	.23	.22	990	900.9	273.3	65.2
56.50	0.98	0.00	0.02	1.00	.13	.12	1043	901.8	271.7	64.0
57.00	0.93	0.00	0.02	.95	.15	.15	1031	902.7	270.2	62.9
57.50	0.90	0.00	0.02	.92	.17	.16	1022	903.6	268.8	61.7
58.00	0.95	0.00	0.03	.97	.15	.14	1034	904.6	267.4	60.5
58.50	0.94	0.00	0.03	.97	.16	.15	1032	905.5	266.0	59.3
59.00	0.88	0.00	0.03	.91	.19	.18	1016	906.5	264.6	58.2
59.50	0.85	0.00	0.03	.88	.21	.19	1012	907.4	263.3	57.0
60.00	0.84	0.00	0.03	.87	.21	.19	1011	908.4	262.0	55.8
60.50	0.83	0.00	0.03	.85	.23	.21	1004	909.4	260.7	54.6
61.00	0.78	0.00	0.03	.81	.25	.23	995	910.3	259.4	53.4
61.50	0.82	0.00	0.03	.85	.23	.20	1008	911.3	258.1	52.2
62.00	0.78	0.00	0.03	.81	.25	.23	999	912.3	256.9	51.0
62.50	0.76	0.00	0.03	.79	.27	.24	992	913.3	255.7	49.8
63.00	0.71	0.00	0.03	.74	.30	.27	976	914.2	254.5	48.6
63.50	0.66	0.00	0.03	.69	.33	.30	960	915.2	253.3	47.4
64.00	0.66	0.00	0.03	.69	.34	.30	960	916.2	252.1	46.2
64.50	0.61	0.05	0.03	.69	.34	.30	962	917.1	250.9	45.0
65.00	0.55	0.10	0.03	.68	.35	.30	960	918.1	249.8	43.8
65.50	0.49	0.15	0.03	.68	.35	.30	961	919.0	248.6	42.6
66.00	0.43	0.19	0.03	.66	.36	.32	954	920.0	247.5	41.4
66.50	0.37	0.23	0.03	.63	.39	.34	942	920.9	246.4	40.2
67.00	0.33	0.26	0.04	.63	.39	.34	943	921.8	245.3	39.0
67.50	0.32	0.27	0.04	.62	.40	.35	937	922.8	244.1	37.7
68.00	0.27	0.30	0.04	.61	.41	.36	931	923.7	243.0	36.5
40669.00	0.23	0.33	0.04	.60	-17.43	-17.37	925	925.4	240.8	34.1
70.00	0.26	0.34	0.04	.63	.41	.35	935	927.2	238.7	31.7
71.00	0.28	0.35	0.04	.67	.39	.32	947	928.9	236.6	29.2
72.00	0.31	0.35	0.04	.70	.38	.31	955	930.5	234.4	26.8
73.00	0.49	0.35	0.03	.87	.30	.21	1001	932.1	232.3	24.3
74.00	0.51	0.35	0.03	.89	.29	.20	1005	933.6	230.2	21.9
40674.50	0.50	0.34	0.03	.88	-17.30	-17.21	1005	934.3	229.2	20.7
75.00	0.43	0.34	0.03	.80	.34	.25	983	935.0	228.2	19.4
75.50	0.36	0.33	0.03	.73	.38	.29	961	935.7	227.1	18.2
76.00	0.42	0.33	0.03	.78	.35	.26	977	936.4	226.1	17.0
76.50	0.72	0.32	0.03	1.08	.22	.12	1045	937.0	225.1	15.8
77.00	0.70	0.32	0.03	1.05	.24	.13	1038	937.7	224.1	14.5

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40677.50	0.42	0.31	0.03	.76	-17.36	-17.27	978	938.3	223.0	13.3
78.00	0.27	0.30	0.03	.60	.45	.37	924	938.9	222.0	12.1
78.50	0.25	0.29	0.03	.58	.47	.38	912	939.4	221.0	10.9
79.00	0.34	0.28	0.03	.65	.43	.34	937	940.0	220.0	9.6
79.50	0.40	0.27	0.03	.71	.40	.30	954	940.5	219.0	8.4
80.00	0.36	0.26	0.03	.65	.44	.34	932	941.0	217.9	7.2
80.50	0.37	0.25	0.03	.65	.44	.34	932	941.5	216.9	6.0
81.00	0.40	0.25	0.03	.68	.42	.32	946	941.9	215.9	4.7
81.50	0.41	0.24	0.02	.67	.42	.32	942	942.4	214.9	3.5
82.00	0.55	0.23	0.02	.81	.35	.24	983	942.8	213.9	2.3
82.50	0.72	0.22	0.02	.96	.28	.17	1018	943.1	212.9	1.0
83.00	0.60	0.21	0.02	.83	.35	.23	983	943.5	211.9	-0.2
83.50	0.47	0.20	0.02	.69	.43	.31	940	943.8	210.9	-1.4
84.00	0.51	0.19	0.02	.72	.41	.29	951	944.1	209.9	-2.6
84.50	0.49	0.18	0.02	.69	.43	.31	940	944.4	208.9	-3.9
85.00	0.56	0.17	0.02	.74	.40	.28	957	944.6	207.8	-5.1
85.50	0.80	0.16	0.02	.97	.28	.16	1017	944.9	206.8	-6.3
86.00	0.94	0.14	0.01	1.10	.23	.11	1045	945.0	205.8	-7.5
86.50	0.64	0.13	0.01	.78	.37	.26	970	945.2	204.8	-8.8
87.00	0.62	0.12	0.01	.75	.39	.27	958	945.3	203.8	-10.0
87.50	0.63	0.11	0.01	.75	.40	.27	954	945.5	202.8	-11.2
40688.00	0.62	0.10	0.01	.72	-17.41	-17.29	946	945.5	201.8	-12.4
89.00	0.62	0.07	0.01	.69	.42	.30	938	945.6	199.8	-14.9
90.00	0.60	0.05	0.00	.65	.43	.33	927	945.6	197.7	-17.4
91.00	0.59	0.02	0.00	.61	.45	.35	913	945.5	195.7	-19.8
92.00	0.63	0.00	0.00	.62	.44	.34	915	945.2	193.7	-22.2
93.00	0.69	-0.02	-0.01	.66	.42	.31	925	944.9	191.6	-24.7
40693.50	0.69	-0.03	-0.01	.65	-17.43	-17.32	918	944.7	190.6	-25.9
94.00	0.75	-0.05	-0.01	.70	.39	.28	941	944.5	189.6	-27.1
94.50	0.82	-0.06	-0.01	.75	.35	.25	960	944.2	188.5	-28.4
95.00	1.04	-0.07	-0.01	.96	.24	.14	1021	943.9	187.5	-29.6
95.50	1.31	-0.08	-0.01	1.22	.14	.04	1077	943.6	186.5	-30.8
96.00	0.77	-0.09	-0.01	.66	.40	.30	928	943.3	185.4	-32.0
96.50	0.41	-0.11	-0.02	.28	.76	.67	689	942.9	184.4	-33.2
97.00	0.63	-0.12	-0.02	.49	.52	.43	843	942.5	183.3	-34.4
97.50	1.01	-0.13	-0.02	.86	.28	.18	988	942.2	182.3	-35.7
98.00	1.94	-0.14	-0.02	1.78	-16.98	-16.87	1148	941.7	181.2	-36.9
98.50	1.03	-0.15	-0.02	.85	-17.29	-17.18	982	941.3	180.2	-38.1
99.00	0.77	-0.17	-0.02	.59	.42	.34	899	940.8	179.1	-39.3
99.50	0.76	-0.18	-0.02	.56	.44	.36	886	940.4	178.0	-40.5
40700.00	0.74	-0.19	-0.03	.52	-17.47	-17.39	863	939.9	177.0	-41.7
01.00	0.77	-0.21	-0.03	.53	.46	.38	863	938.9	174.8	-44.1
02.00	0.80	-0.23	-0.03	.54	.45	.37	868	937.8	172.6	-46.5
03.00	0.82	-0.26	-0.03	.52	.46	.38	858	936.6	170.4	-49.0
04.00	0.82	-0.27	-0.04	.51	.46	.38	852	935.4	168.2	-51.4
05.00	0.83	-0.29	-0.04	.50	.46	.38	848	934.1	165.9	-53.8
06.00	0.94	-0.32	-0.04	.58	.39	.32	880	932.8	163.6	-56.1
07.00	1.10	-0.34	-0.04	.72	.29	.22	935	931.5	161.3	-58.5
08.00	1.15	-0.36	-0.05	.75	.27	.20	946	930.2	158.9	-60.9
09.00	1.11	-0.37	-0.05	.69	.29	.23	924	928.8	156.4	-63.3
10.00	1.09	-0.39	-0.05	.65	.31	.25	907	927.4	153.9	-65.6
11.00	1.11	-0.41	-0.05	.71	.26	.20	930	926.0	151.3	-68.0
12.00	1.22	-0.42	-0.05	.74	.24	.18	943	924.6	148.7	-70.3
13.00	1.20	-0.44	-0.05	.70	.25	.20	929	923.2	145.9	-72.6
14.00	1.12	-0.45	-0.06	.62	.29	.24	898	921.8	143.0	-74.9

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40715.00	1.11	-0.46	-0.06	.59	-17.30	-17.26	886	920.5	140.0	-77.2
15.50	1.09	-0.47	-0.06	.57	.31	.27	878	919.8	138.4	-78.3
16.00	1.13	-0.47	-0.06	.60	.28	.24	894	919.1	136.8	-79.5
16.50	1.16	-0.48	-0.06	.62	.26	.22	904	918.5	135.2	-80.6
17.00	1.18	-0.48	-0.06	.64	.24	.21	913	917.8	133.4	-81.7
17.50	1.24	-0.49	-0.06	.69	.21	.17	934	917.2	131.7	-82.8
18.00	1.29	-0.49	-0.06	.73	.18	.15	947	916.6	129.8	-83.9
18.50	1.33	-0.49	-0.06	.78	.16	.12	962	916.0	127.9	-85.0
19.00	1.43	-0.50	-0.06	.87	.11	.07	991	915.3	125.8	-86.1
19.50	1.45	-0.50	-0.06	.89	.09	.06	999	914.8	123.7	-87.2
20.00	1.47	-0.50	-0.06	.90	.08	.05	1003	914.2	121.5	-88.2
20.50	1.51	-0.51	-0.06	.94	.06	.03	1014	913.6	119.1	-89.3
21.00	1.49	-0.51	-0.06	.92	.07	.04	1008	913.1	116.6	-90.3
21.50	1.40	-0.51	-0.06	.83	.11	.08	982	912.6	114.0	-91.4
40722.00	1.44	-0.51	-0.06	.87	-17.09	-17.06	995	912.0	111.1	-92.4
23.00	1.52	-0.50	-0.06	.96	.04	.01	1023	911.1	104.7	-94.3
24.00	1.54	-0.50	-0.06	.98	.03	.00	1029	910.2	97.2	-96.1
25.00	1.61	-0.50	-0.06	1.04	-16.99	-16.97	1046	909.4	88.3	-97.8
26.00	1.63	-0.49	-0.06	1.08	.98	.95	1056	908.7	77.6	-99.2
27.00	1.62	-0.48	-0.06	1.08	.97	.95	1056	908.2	65.1	-100.3
28.00	1.60	-0.46	-0.06	1.08	.97	.95	1058	907.7	50.9	-101.0
29.00	1.52	-0.44	-0.06	1.03	.99	.97	1047	907.3	36.0	-101.2
30.00	1.44	-0.41	-0.06	.98	-17.01	.99	1035	907.1	21.7	-100.9
31.00	1.40	-0.37	-0.06	.97	.01	-17.00	1033	906.9	9.0	-100.3
32.00	1.35	-0.33	-0.06	.97	.01	-16.99	1036	906.9	358.1	-99.3
40732.50	1.30	-0.29	-0.06	.95	-17.02	-17.00	1033	907.0	353.3	-98.7
33.00	1.31	-0.25	-0.06	1.00	.00	-16.98	1046	907.1	349.0	-98.1
33.50	1.29	-0.20	-0.05	1.03	-16.99	.97	1052	907.2	345.0	-97.4
34.00	1.70	-0.15	-0.05	1.50	.84	.82	1144	907.3	341.3	-96.7
34.50	1.86	-0.08	-0.05	1.73	.78	.76	1178	907.4	337.9	-95.9
35.00	1.87	0.00	-0.05	1.81	.76	.74	1189	907.6	334.8	-95.2
35.50	1.17	0.00	-0.05	1.12	.97	.95	1073	907.9	331.9	-94.4
36.00	1.12	0.00	-0.05	1.07	.99	.97	1063	908.1	329.2	-93.5
36.50	1.08	0.00	-0.05	1.03	-17.01	.99	1053	908.4	326.6	-92.7
37.00	1.01	0.00	-0.05	.96	.04	-17.02	1035	908.7	324.2	-91.9
37.50	1.02	0.00	-0.05	.97	.04	.02	1039	909.0	321.9	-91.0
38.00	1.15	0.00	-0.05	1.10	-16.99	-16.97	1071	909.4	319.8	-90.1
38.50	1.42	0.00	-0.05	1.38	.90	.87	1126	909.8	317.7	-89.2
39.00	1.33	0.00	-0.05	1.28	.94	.91	1107	910.2	315.7	-88.4
39.50	1.23	0.00	-0.05	1.18	.97	.94	1090	910.6	313.8	-87.5
40.00	1.02	0.00	-0.05	.98	-17.05	-17.02	1044	911.1	312.0	-86.5
40.50	0.95	0.00	-0.05	.91	.09	.06	1024	911.5	310.2	-85.6
40741.00	0.93	0.00	-0.05	.88	-17.10	-17.08	1017	912.0	308.5	-84.7
42.00	0.89	0.00	-0.05	.84	.13	.10	1007	913.1	305.3	-82.8
43.00	0.91	0.00	-0.04	.86	.13	.10	1016	914.3	302.2	-81.0
44.00	0.88	0.00	-0.04	.83	.15	.12	1010	915.5	299.2	-79.1
45.00	0.86	0.00	-0.04	.82	.17	.14	1005	916.8	296.4	-77.2
46.00	0.84	0.00	-0.04	.80	.19	.16	999	918.1	293.7	-75.2
47.00	0.80	0.00	-0.04	.76	.22	.19	989	919.5	291.0	-73.3
48.00	0.83	0.00	-0.04	.79	.22	.18	1001	920.9	288.4	-71.3
49.00	0.86	0.00	-0.04	.82	.22	.17	1011	922.4	285.9	-69.4
50.00	0.95	0.00	-0.03	.91	.19	.14	1037	923.9	283.4	-67.4
51.00	1.01	0.00	-0.03	.98	.18	.12	1055	925.4	281.0	-65.4
52.00	0.98	0.00	-0.03	.95	.21	.15	1045	926.9	278.6	-63.4
53.00	0.99	0.00	-0.03	.96	.22	.15	1048	928.5	276.2	-61.4
54.00	0.98	0.00	-0.03	.95	.24	.17	1049	930.0	273.9	-59.4
55.00	1.00	0.00	-0.03	.97	.24	.17	1056	931.5	271.6	-57.3

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40756.00	0.92	0.00	-0.03	.89	-17.28	-17.21	1040	933.0	269.3	-55.3
40756.50	0.69	0.00	-0.03	.66	-17.41	-17.34	968	933.7	268.1	-54.3
57.00	0.72	0.00	-0.03	.69	.40	.32	983	934.4	267.0	-53.2
57.50	0.84	0.00	-0.03	.81	.34	.26	1024	935.2	265.9	-52.2
58.00	0.93	0.00	-0.03	.90	.30	.22	1051	935.9	264.8	-51.2
58.50	1.05	0.00	-0.03	1.02	.25	.17	1086	936.6	263.7	-50.2
59.00	0.91	0.00	-0.03	.88	.31	.23	1059	937.2	262.5	-49.1
59.50	0.74	0.00	-0.03	.72	.39	.31	1015	937.9	261.4	-48.1
60.00	0.63	0.00	-0.03	.60	.47	.40	971	938.5	260.3	-47.0
60.50	0.55	0.00	-0.03	.52	.54	.46	936	939.2	259.2	-46.0
61.00	0.57	0.00	-0.03	.55	.51	.44	956	939.8	258.1	-45.0
61.50	0.63	0.00	-0.03	.60	.48	.40	982	940.4	257.0	-43.9
40762.00	0.63	0.00	-0.03	.60	-17.49	-17.41	984	941.0	255.9	-42.9
63.00	0.60	0.00	-0.03	.57	.52	.44	972	942.1	253.8	-40.8
64.00	0.69	0.00	-0.03	.66	.48	.39	1007	943.0	251.6	-38.7
65.00	0.76	0.00	-0.03	.73	.44	.35	1035	943.9	249.4	-36.5
66.00	0.75	-0.03	-0.03	.69	.47	.37	1033	944.7	247.3	-34.4
67.00	0.71	-0.08	-0.03	.60	.53	.44	1003	945.4	245.1	-32.3
68.00	0.71	-0.12	-0.03	.56	.58	.48	985	945.9	243.0	-30.1
69.00	0.77	-0.14	-0.03	.60	.56	.46	1001	946.3	240.8	-28.0
40770.00	0.81	-0.16	-0.03	.62	-17.56	-17.45	1010	946.6	238.7	-25.9
70.50	0.74	-0.17	-0.03	.53	.63	.52	972	946.6	237.6	-24.8
71.00	1.27	-0.19	-0.04	1.04	.36	.24	1118	946.7	236.6	-23.7
71.50	0.93	-0.20	-0.04	.69	.54	.42	1030	946.7	235.5	-22.6
72.00	0.75	-0.21	-0.04	.50	.67	.56	961	946.6	234.4	-21.5
72.50	0.83	-0.22	-0.04	.58	.61	.50	998	946.5	233.4	-20.5
73.00	0.73	-0.22	-0.04	.47	.71	.59	946	946.4	232.3	-19.4
73.50	0.84	-0.23	-0.04	.57	.63	.51	994	946.3	231.2	-18.3
74.00	0.80	-0.24	-0.04	.51	.66	.55	978	946.1	230.2	-17.2
74.50	0.83	-0.25	-0.04	.53	.63	.53	998	945.9	229.1	-16.1
75.00	0.84	-0.27	-0.04	.53	.64	.54	998	945.6	228.0	-15.0
75.50	0.87	-0.28	-0.04	.55	.62	.52	1010	945.3	227.0	-13.9
76.00	0.91	-0.29	-0.04	.58	.61	.50	1018	944.9	225.9	-12.8
76.50	1.07	-0.29	-0.05	.73	.53	.41	1056	944.5	224.8	-11.7
77.00	1.24	-0.30	-0.05	.89	.45	.32	1094	944.1	223.8	-10.6
77.50	0.99	-0.31	-0.05	.63	.58	.47	1034	943.6	222.7	-9.5
78.00	0.87	-0.32	-0.05	.50	.67	.57	993	943.1	221.6	-8.4
78.50	0.80	-0.34	-0.05	.41	.75	.65	951	942.6	220.5	-7.3
40779.00	0.81	-0.35	-0.05	.41	-17.75	-17.65	954	942.0	219.5	-6.2
80.00	0.81	-0.36	-0.05	.40	.75	.66	955	940.7	217.3	-4.0
81.00	0.81	-0.39	-0.05	.37	.78	.69	943	939.3	215.2	-1.8
82.00	0.83	-0.41	-0.06	.36	.78	.70	945	937.7	213.0	0.4
83.00	0.83	-0.43	-0.06	.34	.80	.72	940	936.0	210.8	2.6
84.00	0.81	-0.45	-0.06	.30	.84	.77	916	934.1	208.6	4.8
85.00	0.87	-0.47	-0.06	.34	.79	.72	947	932.1	206.4	7.1
86.00	0.89	-0.50	-0.07	.32	.82	.75	931	930.0	204.2	9.3
87.00	0.89	-0.52	-0.07	.29	.86	.80	908	927.7	202.0	11.5
40787.50	0.83	-0.51	-0.07	.25	-17.92	-17.86	870	926.5	200.9	12.6
88.00	0.90	-0.52	-0.07	.31	.83	.77	919	925.3	199.7	13.8
88.50	0.92	-0.53	-0.07	.31	.85	.78	906	924.1	198.6	14.9
89.00	1.33	-0.54	-0.07	.71	.49	.43	1077	922.9	197.5	16.0
89.50	1.21	-0.56	-0.07	.58	.57	.51	1042	921.6	196.3	17.1
90.00	1.09	-0.57	-0.07	.45	.68	.63	992	920.3	195.2	18.2
90.50	1.11	-0.58	-0.08	.46	.67	.62	996	919.0	194.0	19.4
91.00	1.15	-0.58	-0.08	.49	.64	.59	1009	917.6	192.8	20.5

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40791.50	1.24	-0.59	-0.08	.58	-17.57	-17.52	1039	916.3	191.7	21.6
92.00	1.63	-0.60	-0.08	.95	.35	.30	1124	914.9	190.5	22.7
92.50	1.61	-0.60	-0.08	.93	.35	.30	1122	913.5	189.3	23.8
93.00	1.47	-0.61	-0.08	.78	.43	.38	1093	912.0	188.1	25.0
93.50	1.41	-0.62	-0.08	.71	.46	.43	1075	910.6	186.9	26.1
94.00	1.45	-0.63	-0.08	.74	.44	.41	1082	909.1	185.7	27.2
94.50	1.41	-0.63	-0.08	.69	.47	.44	1070	907.7	184.4	28.3
95.00	1.37	-0.64	-0.08	.65	.49	.47	1060	906.2	183.2	29.4
95.50	1.41	-0.65	-0.08	.68	.46	.45	1069	904.7	181.9	30.6
96.00	1.39	-0.66	-0.08	.66	.47	.46	1063	903.1	180.6	31.7
96.50	1.80	-0.67	-0.08	1.05	.26	.25	1143	901.6	179.3	32.8
97.00	1.97	-0.67	-0.08	1.22	.19	.19	1167	900.0	178.0	33.9
97.50	1.61	-0.68	-0.08	.86	.34	.34	1109	898.5	176.7	35.1
98.00	1.42	-0.68	-0.08	.65	.45	.46	1062	896.9	175.3	36.2
98.50	1.40	-0.69	-0.08	.63	.46	.47	1057	895.3	173.9	37.3
99.00	1.38	-0.70	-0.08	.61	.46	.49	1052	893.8	172.5	38.4
99.50	1.42	-0.70	-0.08	.64	.44	.46	1062	892.2	171.1	39.5
40800.00	1.40	-0.71	-0.08	.61	.45	.48	1056	890.6	169.6	40.6
00.50	1.36	-0.71	-0.08	.57	.47	.50	1044	889.0	168.1	41.7
01.00	1.40	-0.71	-0.08	.60	.44	.48	1055	887.4	166.6	42.8
01.50	1.30	-0.72	-0.08	.50	.51	.55	1024	885.8	165.0	44.0
02.00	1.25	-0.72	-0.08	.45	.55	.60	1005	884.2	163.4	45.1
02.50	1.23	-0.72	-0.08	.43	.56	.61	998	882.6	161.7	46.2
03.00	1.29	-0.72	-0.08	.49	.50	.56	1020	881.0	160.0	47.2
03.50	1.30	-0.73	-0.08	.49	.49	.55	1021	879.4	158.2	48.3
04.00	1.30	-0.73	-0.08	.49	.49	.55	1021	877.8	156.4	49.4
04.50	1.31	-0.73	-0.08	.49	.48	.55	1019	876.2	154.4	50.5
05.00	1.31	-0.74	-0.08	.49	.47	.56	1018	874.7	152.4	51.6
05.50	1.29	-0.74	-0.08	.47	.48	.57	1011	873.1	150.3	52.6
06.00	1.56	-0.74	-0.08	.73	.28	.38	1085	871.5	148.1	53.7
06.50	1.77	-0.74	-0.08	.94	.16	.27	1127	870.0	145.7	54.7
07.00	1.53	-0.74	-0.08	.71	.27	.39	1083	868.5	143.2	55.8
07.50	1.45	-0.74	-0.08	.63	.32	.44	1063	866.9	140.6	56.8
08.00	1.43	-0.75	-0.08	.60	.34	.46	1054	865.4	137.8	57.8
08.50	1.39	-0.75	-0.08	.57	.35	.48	1045	864.0	134.8	58.8
09.00	1.33	-0.74	-0.08	.51	.39	.53	1027	862.5	131.5	59.7
09.50	1.32	-0.74	-0.08	.50	.40	.54	1024	861.1	128.0	60.7
10.00	1.33	-0.74	-0.08	.51	.38	.53	1027	859.6	124.1	61.6
10.50	1.39	-0.74	-0.08	.58	.32	.47	1047	858.2	120.0	62.4
11.00	1.40	-0.73	-0.08	.59	.31	.46	1048	856.9	115.4	63.2
11.50	1.46	-0.73	-0.08	.65	.26	.42	1064	855.5	110.5	64.0
12.00	1.46	-0.73	-0.08	.65	.25	.42	1065	854.2	105.1	64.7
12.50	1.51	-0.73	-0.07	.71	.20	.38	1078	852.9	99.3	65.3
13.00	1.56	-0.72	-0.07	.77	.16	.35	1092	851.6	93.0	65.9
13.50	1.59	-0.72	-0.07	.79	.14	.33	1097	850.4	86.3	66.3
14.00	1.69	-0.72	-0.07	.90	.07	.27	1119	849.2	79.4	66.7
14.50	1.73	-0.71	-0.07	.95	.04	.25	1127	848.0	72.2	66.9
40814.80	1.49	-0.71	-0.07	.71	-17.17	-17.38	1080	847.3	67.9	67.0
15.00	1.99	-0.71	-0.07	1.22	-16.93	.14	1167	846.9	65.0	67.1
15.20	2.82	-0.70	-0.07	2.05	.68	.62	1261	846.4	62.2	67.1
15.40	4.47	-0.70	-0.07	3.70	.40	.84	1383	846.0	59.3	67.1
15.60	2.99	-0.70	-0.07	2.23	.61	.92	1286	845.5	56.5	67.1
15.80	2.67	-0.70	-0.07	1.91	.69	.92	1253	845.1	53.8	67.1
16.00	2.35	-0.69	-0.07	1.59	.78	.11	1219	844.7	51.1	67.0
16.20	2.02	-0.69	-0.07	1.27	.88	.12	1180	844.3	48.4	67.0
16.40	2.03	-0.69	-0.07	1.27	.88	.06	1177	843.9	45.8	66.9
16.60	2.19	-0.68	-0.06	1.44	.83	.06	1196	843.5	43.3	66.8
16.80	2.53	-0.68	-0.06	1.78	.73	.06	1231	843.1	40.8	66.7
17.00	1.87	-0.68	-0.06	1.13	.93	.17	1156	842.7	36.4	66.6

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40817.20	1.71	-0.68	-0.06	.97	-17.00	-17.24	1130	842.3	36.1	66.5
17.40	1.39	-0.67	-0.06	.65	.18	.42	1064	841.9	33.9	66.3
40817.50	1.54	-0.67	-0.06	.80	-17.09	-17.32	1097	841.7	32.8	66.3
18.00	1.49	-0.66	-0.06	.77	.11	.34	1085	840.8	27.6	65.9
18.50	1.55	-0.65	-0.06	.83	.08	.31	1094	839.9	22.8	65.4
19.00	1.60	-0.64	-0.06	.90	.04	.28	1106	839.0	18.4	64.9
19.50	1.66	-0.63	-0.06	.96	.01	.25	1115	838.2	14.4	64.3
20.00	1.71	-0.62	-0.06	1.03	-16.98	.22	1124	837.5	10.7	63.7
20.50	1.76	-0.61	-0.05	1.09	.95	.19	1132	836.8	7.3	63.1
21.00	1.81	-0.60	-0.05	1.15	.92	.17	1141	836.1	4.1	62.5
21.50	1.80	-0.59	-0.05	1.16	.92	.17	1141	835.4	1.2	61.8
22.00	1.79	-0.58	-0.05	1.17	.91	.17	1140	834.8	358.4	61.1
22.50	1.79	-0.57	-0.05	1.17	.91	.17	1138	834.3	355.9	60.4
23.00	1.78	-0.55	-0.05	1.18	.91	.16	1137	833.8	353.5	59.7
23.50	1.82	-0.54	-0.05	1.24	.88	.14	1145	833.3	351.2	59.0
24.00	1.84	-0.52	-0.04	1.27	.87	.14	1148	832.9	349.0	58.2
24.50	2.06	-0.51	-0.04	1.51	.79	.06	1176	832.5	347.0	57.5
25.00	1.97	-0.49	-0.04	1.43	.82	.09	1165	832.1	345.0	56.7
25.50	1.77	-0.48	-0.04	1.25	.88	.15	1140	831.8	343.1	56.0
26.00	1.75	-0.47	-0.04	1.25	.88	.15	1138	831.5	341.3	55.2
26.50	1.74	-0.45	-0.03	1.26	.88	.15	1137	831.3	339.6	54.5
27.00	1.67	-0.43	-0.03	1.21	.89	.17	1130	831.1	337.9	53.7
27.50	1.62	-0.41	-0.03	1.18	.91	.18	1124	830.9	336.3	52.9
28.00	1.66	-0.39	-0.03	1.24	.89	.16	1129	830.8	334.7	52.1
28.50	1.67	-0.36	-0.03	1.27	.88	.15	1129	830.7	333.2	51.3
29.00	1.67	-0.34	-0.03	1.30	.88	.14	1130	830.7	331.7	50.6
29.50	1.68	-0.31	-0.02	1.34	.86	.13	1135	830.7	330.2	49.8
30.00	1.81	-0.29	-0.02	1.50	.81	.08	1152	830.7	328.8	49.0
30.50	2.00	-0.26	-0.02	1.72	.75	.03	1174	830.7	327.4	48.2
31.00	1.95	-0.23	-0.02	1.70	.76	.03	1172	830.8	326.0	47.4
31.50	1.83	-0.19	-0.02	1.61	.79	.06	1159	830.9	324.7	46.6
32.00	1.85	-0.15	-0.02	1.69	.77	.04	1164	831.1	323.4	45.8
32.50	1.46	-0.11	-0.01	1.34	.88	.15	1124	831.3	322.1	45.0
40831.00	1.43	-0.08	-0.01	1.33	-16.88	-17.15	1120	831.5	320.8	44.2
34.00	1.37	-0.05	-0.01	1.31	.90	.16	1112	832.0	318.3	42.6
35.00	1.32	0.00	-0.01	1.31	.91	.17	1105	832.6	315.9	41.0
36.00	1.27	0.00	0.00	1.26	.94	.18	1093	833.3	313.6	39.4
37.00	1.23	0.00	0.00	1.23	.96	.20	1084	834.1	311.2	37.8
38.00	1.22	0.00	0.00	1.22	.97	.21	1077	835.0	309.0	36.1
39.00	1.28	0.00	0.00	1.28	.96	.18	1080	835.9	306.7	34.5
40.00	1.11	0.00	0.01	1.12	-17.03	.24	1052	837.0	304.5	32.9
40841.00	0.87	0.00	0.01	.88	-17.15	-17.33	1008	838.1	302.3	31.3
41.50	0.85	0.00	0.01	.86	.16	.34	1001	838.6	301.2	30.5
42.00	0.98	0.00	0.01	1.00	.10	.28	1025	839.2	300.2	29.6
42.50	1.33	0.00	0.01	1.34	-16.97	.16	1072	839.8	299.1	28.8
43.00	1.23	0.00	0.01	1.25	-17.01	.20	1058	840.5	298.0	28.0
43.50	1.11	0.00	0.01	1.12	.06	.24	1037	841.1	297.0	27.2
44.00	1.01	0.00	0.02	1.03	.10	.28	1021	841.7	295.9	26.4
44.50	0.94	0.00	0.02	.96	.13	.30	1008	842.4	294.9	25.6
40845.00	0.86	0.00	0.02	.88	-17.17	-17.33	991	843.1	293.8	24.8
46.00	0.76	0.00	0.02	.78	.22	.37	967	844.4	291.7	23.1
47.00	0.70	0.00	0.02	.72	.26	.41	948	845.8	289.7	21.5
48.00	0.69	0.00	0.02	.71	.28	.42	940	847.3	287.6	19.9
49.00	1.03	0.00	0.02	1.05	.11	.26	1009	848.7	285.6	18.2
50.00	1.02	0.00	0.02	1.04	.13	.27	1002	850.2	283.5	16.6
51.00	0.96	0.00	0.02	.98	.16	.30	988	851.6	281.5	15.0

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40852.00	0.90	0.00	0.02	.92	-17.19	-17.32	974	853.1	279.5	13.3
40853.00	0.88	0.00	0.02	.90	-17.20	-17.32	969	854.6	277.5	11.6
53.50	0.88	0.00	0.02	.90	.20	.32	968	855.3	276.5	10.8
54.00	0.88	0.00	0.02	.90	.20	.32	966	856.0	275.4	9.9
54.50	0.84	0.00	0.02	.86	.22	.34	956	856.7	274.4	9.1
55.00	0.82	0.00	0.02	.84	.23	.35	951	857.4	273.4	8.3
55.50	0.94	0.00	0.02	.96	.18	.29	977	858.1	272.4	7.5
56.00	0.93	0.00	0.02	.95	.19	.30	972	858.8	271.4	6.6
56.50	0.92	0.00	0.02	.94	.20	.31	967	859.5	270.4	5.8
57.00	0.97	0.00	0.02	.99	.18	.29	976	860.1	269.4	5.0
57.50	0.89	0.00	0.02	.91	.21	.31	962	860.8	268.4	4.1
58.00	0.84	0.00	0.02	.86	.23	.32	954	861.4	267.4	3.3
58.50	0.79	0.00	0.02	.81	.25	.34	942	862.0	266.4	2.4
59.00	0.72	0.00	0.02	.73	.30	.39	918	862.6	265.4	1.6
59.50	0.75	0.00	0.02	.77	.28	.37	926	863.2	264.4	0.8
60.00	0.71	0.00	0.02	.73	.30	.40	914	863.8	263.4	-0.1
60.50	0.67	0.00	0.01	.69	.33	.42	902	864.3	262.4	-0.9
61.00	0.66	0.00	0.01	.67	.34	.43	893	864.9	261.4	-1.7
61.50	0.68	0.00	0.01	.69	.33	.42	900	865.4	260.4	-2.6
62.00	0.65	0.00	0.01	.66	.35	.43	890	865.8	259.3	-3.4
62.50	0.64	0.00	0.01	.66	.35	.43	890	866.3	258.3	-4.3
63.00	0.77	0.00	0.01	.78	.28	.37	923	866.7	257.3	-5.1
63.50	0.88	0.00	0.01	.89	.23	.32	947	867.1	256.3	-6.0
64.00	0.62	0.00	0.01	.63	.38	.46	872	867.5	255.3	-6.8
64.50	0.60	0.00	0.01	.61	.39	.47	868	867.9	254.3	-7.6
65.00	0.58	0.00	0.01	.59	.40	.48	861	868.2	253.3	-8.5
65.50	0.57	0.00	0.01	.57	.42	.49	854	868.5	252.2	-9.3
66.00	0.55	0.00	0.00	.55	.43	.50	848	868.8	251.2	-10.2
66.50	0.54	0.00	0.00	.54	.44	.51	845	869.0	250.2	-11.0
67.00	0.53	0.00	0.00	.53	.44	.51	842	869.2	249.2	-11.9
67.50	0.54	0.00	0.00	.54	.43	.50	847	869.4	248.1	-12.7
68.00	0.51	0.00	0.00	.51	.46	.53	833	869.5	247.1	-13.6
68.50	0.56	0.00	0.00	.55	.43	.50	849	869.6	246.1	-14.4
69.00	0.61	0.00	0.00	.60	.39	.47	869	869.7	245.0	-15.3
69.50	0.68	0.00	-0.01	.68	.35	.42	894	869.7	244.0	-16.1
70.00	0.71	0.00	-0.01	.70	.34	.42	894	869.7	242.9	-17.0
70.50	0.82	0.00	-0.01	.81	.28	.37	924	869.7	241.9	-17.8
71.00	1.08	0.00	-0.01	1.07	.16	.25	979	869.6	240.8	-18.7
71.50	1.14	0.00	-0.02	1.12	.14	.23	989	869.5	239.8	-19.5
72.00	0.86	0.00	-0.02	.84	.26	.33	938	869.4	238.7	-20.4
72.50	0.65	-0.02	-0.02	.61	.39	.47	867	869.2	237.6	-21.2
73.00	0.72	-0.06	-0.02	.64	.37	.46	876	869.0	236.5	-22.1
73.50	0.78	-0.09	-0.02	.66	.36	.44	887	868.8	235.5	-22.9
74.00	0.84	-0.12	-0.03	.69	.33	.41	900	868.5	234.4	-23.8
74.50	0.93	-0.15	-0.03	.75	.29	.37	921	868.2	233.3	-24.6
75.00	1.05	-0.18	-0.03	.84	.24	.32	947	867.9	232.2	-25.5
40875.20	1.15	-0.19	-0.03	.93	-17.20	-17.28	967	867.8	231.8	-25.8
75.40	1.16	-0.20	-0.03	.93	.20	.28	967	867.6	231.3	-26.2
75.60	1.51	-0.21	-0.03	1.27	.07	.16	1018	867.4	230.9	-26.5
75.80	1.53	-0.22	-0.04	1.27	.08	.18	1012	867.3	230.4	-26.9
76.00	2.20	-0.23	-0.04	1.94	-16.89	.00	1085	867.1	230.0	-27.2
76.20	2.22	-0.23	-0.04	1.95	.89	.00	1087	867.0	229.5	-27.5
76.40	2.07	-0.24	-0.04	1.79	.93	.02	1075	866.8	229.1	-27.9
76.60	1.27	-0.25	-0.04	.98	-17.19	.28	966	866.6	228.6	-28.2
76.80	1.45	-0.26	-0.04	1.15	.12	.22	996	866.4	228.2	-28.6
77.00	1.63	-0.27	-0.04	1.32	.06	.16	1020	866.2	227.7	-28.9
77.20	2.14	-0.28	-0.04	1.82	-16.92	.03	1076	866.0	227.3	-29.3
77.40	3.31	-0.28	-0.04	2.98	.70	-16.82	1158	865.8	226.8	-29.6

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40877.60	2.51	-0.29	-0.04	2.17	-16.84	-16.95	1106	865.6	226.4	-29.9
77.80	1.05	-0.30	-0.05	.70	-17.33	-17.43	899	865.4	225.9	-30.3
78.00	0.58	-0.31	-0.05	.22	.83	.93	647	865.2	225.4	-30.6
40878.50	1.00	-0.33	-0.05	.62	-17.37	-17.48	874	864.7	224.3	-31.5
79.00	1.28	-0.35	-0.05	.88	.22	.32	951	864.1	223.1	-32.3
79.50	1.33	-0.36	-0.05	.91	.20	.30	959	863.5	222.0	-33.2
80.00	1.38	-0.38	-0.06	.94	.18	.28	968	862.8	220.8	-34.0
80.50	1.35	-0.40	-0.06	.89	.20	.30	963	862.2	219.6	-34.9
81.00	1.38	-0.41	-0.06	.91	.19	.29	965	861.5	218.3	-35.7
81.50	1.69	-0.44	-0.06	1.19	.08	.19	1010	860.8	217.1	-36.6
82.00	2.30	-0.45	-0.06	1.78	-16.90	.03	1077	860.0	215.9	-37.4
82.50	2.61	-0.47	-0.07	2.08	.83	-16.96	1102	859.2	214.6	-38.3
83.00	1.98	-0.48	-0.07	1.43	.99	-17.13	1040	858.5	213.3	-39.1
83.50	1.80	-0.50	-0.07	1.23	-17.05	.19	1015	857.6	212.0	-40.0
84.00	1.65	-0.52	-0.07	1.06	.11	.25	990	856.8	210.7	-40.6
84.50	1.65	-0.53	-0.08	1.04	.12	.26	987	856.0	209.4	-41.7
85.00	1.70	-0.55	-0.08	1.08	.10	.25	994	855.1	208.0	-42.5
85.50	1.73	-0.56	-0.08	1.09	.09	.24	996	854.2	206.6	-43.4
86.00	1.82	-0.58	-0.08	1.16	.06	.22	1007	853.3	205.2	-44.2
86.50	1.87	-0.59	-0.08	1.20	.04	.21	1014	852.4	203.7	-45.1
87.00	2.30	-0.60	-0.09	1.61	-16.90	.08	1065	851.4	202.3	-45.9
87.50	2.59	-0.61	-0.09	1.89	.82	.02	1093	850.5	200.7	-46.7
88.00	2.96	-0.62	-0.09	2.24	.74	-16.94	1121	849.5	199.2	-47.6
88.50	3.20	-0.63	-0.09	2.48	.69	.90	1139	848.5	197.5	-48.4
89.00	2.92	-0.63	-0.09	2.19	.74	.95	1121	847.5	195.9	-49.2
89.50	2.87	-0.65	-0.10	2.12	.75	.96	1116	846.5	194.2	-50.0
90.00	2.69	-0.66	-0.10	1.93	.79	-17.01	1097	845.5	192.4	-50.9
90.50	2.69	-0.67	-0.10	1.92	.79	.01	1096	844.4	190.5	-51.7
91.00	2.72	-0.68	-0.10	1.94	.79	.00	1098	843.4	188.6	-52.5
91.50	2.78	-0.69	-0.10	1.99	.77	-16.94	1102	842.3	186.6	-53.3
92.00	2.81	-0.70	-0.10	2.01	.77	.98	1104	841.3	184.5	-54.1
92.50	2.89	-0.70	-0.10	2.06	.74	.97	1111	840.2	182.3	-54.9
93.00	2.94	-0.71	-0.10	2.13	.72	.96	1116	839.1	179.9	-55.6
93.50	3.08	-0.72	-0.11	2.25	.69	.94	1126	838.0	177.5	-56.4
94.00	3.16	-0.72	-0.11	2.33	.67	.92	1133	836.9	174.8	-57.1
94.50	3.21	-0.73	-0.11	2.37	.66	.91	1136	835.8	172.0	-57.9
95.00	3.24	-0.73	-0.11	2.40	.65	.91	1138	834.7	169.0	-58.6
95.50	3.32	-0.74	-0.11	2.47	.63	.89	1144	833.6	165.7	-59.3
96.00	3.40	-0.74	-0.11	2.54	.60	.88	1151	832.5	162.2	-59.9
96.50	3.47	-0.74	-0.11	2.62	.58	.86	1158	831.4	158.3	-60.6
40897.00	3.44	-0.75	-0.11	2.59	-16.59	-16.87	1155	830.3	154.2	-61.1
97.20	5.76	-0.75	-0.11	4.90	.30	.59	1264	829.8	152.4	-61.4
97.40	4.47	-0.75	-0.11	3.61	.40	.71	1222	829.4	150.5	-61.6
97.60	4.65	-0.75	-0.11	3.79	.37	.68	1233	828.9	148.6	-61.8
97.80	4.18	-0.75	-0.11	3.32	.44	.75	1207	828.5	146.7	-62.0
98.00	3.38	-0.75	-0.11	2.51	.57	.88	1159	828.1	144.6	-62.2
40898.50	3.07	-0.75	-0.11	2.20	-16.63	-16.94	1135	827.0	139.2	-62.6
99.00	3.25	-0.75	-0.11	2.38	.60	.91	1145	825.9	133.3	-63.0
99.50	3.27	-0.76	-0.11	2.40	.59	.90	1147	824.8	126.9	-63.2
40900.00	3.55	-0.76	-0.11	2.68	.53	.85	1167	823.7	120.1	-63.4
00.50	3.67	-0.76	-0.11	2.80	.50	.83	1177	822.6	113.0	-63.5
01.00	3.74	-0.75	-0.11	2.88	.48	.82	1183	821.5	105.7	-63.5
01.50	3.86	-0.75	-0.11	3.00	.45	.80	1192	820.4	98.3	-63.3
02.00	3.91	-0.75	-0.11	3.04	.44	.79	1195	819.4	91.0	-63.0
02.50	3.84	-0.74	-0.11	2.98	.44	.80	1192	818.3	84.0	-62.7
03.00	3.85	-0.74	-0.11	3.00	.44	.80	1193	817.3	77.3	-62.2
03.50	3.91	-0.74	-0.11	3.05	.43	.79	1197	816.3	71.1	-61.6

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40904.00	3.87	-0.73	-0.11	3.03	-16.42	-16.79	1199	815.2	65.3	-61.0
04.50	3.92	-0.73	-0.11	3.08	.40	.79	1203	814.2	60.0	-60.2
05.00	3.94	-0.72	-0.11	3.11	.40	.78	1205	813.3	55.1	-59.5
05.50	3.99	-0.71	-0.11	3.17	.38	.77	1209	812.3	50.7	-58.6
06.00	4.00	-0.71	-0.11	3.19	.37	.77	1212	811.4	46.6	-57.8
06.50	4.00	-0.70	-0.11	3.20	.36	.76	1214	810.4	42.8	-56.8
07.00	4.07	-0.69	-0.11	3.28	.34	.75	1221	809.5	39.3	-55.9
07.50	4.10	-0.68	-0.10	3.32	.34	.74	1223	808.7	36.1	-55.0
08.00	4.15	-0.67	-0.10	3.37	.33	.74	1225	807.8	33.1	-54.0
40908.20	4.27	-0.67	-0.10	3.50	-16.31	-16.73	1230	807.5	32.0	-53.6
08.40	4.43	-0.67	-0.10	3.66	.29	.71	1239	807.1	30.9	-53.2
08.60	4.75	-0.66	-0.10	3.99	.25	.67	1254	806.8	29.8	-52.8
08.80	5.23	-0.66	-0.10	4.47	.20	.61	1277	806.5	28.7	-52.4
09.00	6.04	-0.66	-0.10	5.28	.12	.53	1310	806.2	27.7	-52.0
09.20	5.54	-0.65	-0.10	4.79	.15	.57	1294	805.8	26.7	-51.6
09.40	4.54	-0.65	-0.10	3.80	.25	.66	1254	805.5	25.7	-51.1
09.60	4.20	-0.64	-0.10	3.46	.29	.72	1236	805.2	24.8	-50.7
09.80	4.02	-0.64	-0.09	3.28	.33	.75	1223	804.9	23.8	-50.3
10.00	3.84	-0.64	-0.09	3.11	.36	.78	1212	804.6	22.9	-49.9
10.20	3.66	-0.63	-0.09	2.93	.38	.81	1202	804.3	22.0	-49.5
10.40	3.31	-0.63	-0.09	2.59	.43	.87	1182	804.0	21.1	-49.1
10.60	3.13	-0.63	-0.09	2.41	.47	.90	1170	803.8	20.3	-48.6
10.80	3.44	-0.62	-0.09	2.73	.41	.85	1190	803.5	19.4	-48.2
11.00	3.74	-0.62	-0.09	3.03	.36	.80	1208	803.2	18.6	-47.8
11.20	4.21	-0.61	-0.09	3.51	.29	.73	1234	802.9	17.8	-47.4
11.40	6.48	-0.61	-0.09	5.78	.07	.51	1327	802.7	17.0	-47.0
11.60	6.78	-0.61	-0.09	6.09	.04	.47	1341	802.4	16.2	-46.5
11.80	6.60	-0.60	-0.09	5.91	.05	.48	1336	802.1	15.4	-46.1
12.00	5.10	-0.60	-0.08	4.41	.18	.62	1278	801.9	14.6	-45.7
12.20	4.75	-0.59	-0.08	4.07	.22	.67	1262	801.6	13.9	-45.3
12.40	4.56	-0.59	-0.08	3.88	.24	.68	1254	801.4	13.1	-44.8
12.60	4.37	-0.58	-0.08	3.70	.26	.71	1246	801.2	12.4	-44.4
12.80	4.17	-0.58	-0.08	3.51	.29	.73	1236	800.9	11.7	-44.0
13.00	4.15	-0.57	-0.08	3.50	.29	.74	1235	800.7	10.9	-43.5
40913.50	3.99	-0.56	-0.08	3.36	-16.31	-16.76	1228	800.1	9.2	-42.5
14.00	3.81	-0.54	-0.08	3.19	.33	.78	1219	799.6	7.5	-41.4
14.50	3.71	-0.52	-0.07	3.11	.35	.80	1212	799.1	5.9	-40.3
15.00	3.45	-0.51	-0.07	2.87	.39	.84	1198	798.7	4.3	-39.2
15.50	3.24	-0.49	-0.07	2.68	.42	.88	1185	798.3	2.7	-38.1
16.00	3.09	-0.48	-0.07	2.55	.44	.90	1176	797.9	1.2	-37.1
16.50	2.91	-0.46	-0.06	2.39	.48	.94	1164	797.5	359.7	-36.0
17.00	2.86	-0.44	-0.06	2.36	.49	.95	1161	797.2	358.2	-34.9
17.50	2.87	-0.42	-0.06	2.39	.48	.94	1164	796.9	356.8	-33.8
18.00	3.07	-0.41	-0.06	2.60	.44	.91	1177	796.7	355.3	-32.7
18.50	3.19	-0.39	-0.05	2.74	.42	.89	1186	796.5	353.9	-31.6
19.00	3.13	-0.37	-0.05	2.71	.43	.90	1183	796.3	352.6	-30.5
19.50	3.07	-0.35	-0.05	2.67	.44	.91	1179	796.1	351.2	-29.4
20.00	3.05	-0.34	-0.04	2.67	.45	.91	1179	796.0	349.9	-28.4
20.50	2.96	-0.32	-0.04	2.60	.46	.92	1174	796.0	348.6	-27.3
21.00	2.95	-0.31	-0.04	2.61	.46	.92	1174	795.9	347.3	-26.2
21.50	2.93	-0.29	-0.03	2.61	.47	.93	1173	795.9	346.0	-25.1
22.00	3.01	-0.27	-0.03	2.72	.45	.91	1179	795.9	344.7	-24.0
22.50	3.03	-0.25	-0.03	2.76	.45	.91	1182	796.0	343.4	-22.9
23.00	3.01	-0.23	-0.02	2.76	.45	.91	1183	796.1	342.2	-21.9
23.50	3.07	-0.21	-0.02	2.84	.44	.90	1187	796.2	340.9	-20.8
24.00	3.10	-0.19	-0.02	2.89	.44	.90	1187	796.3	339.7	-19.7
24.50	3.13	-0.17	-0.01	2.95	.44	.89	1189	796.5	338.4	-18.6
25.00	3.21	-0.15	-0.01	3.05	.42	.88	1197	796.7	337.2	-17.5

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40925.50	3.27	-0.13	-0.01	3.13	-16.41	-16.87	1203	797.0	336.0	-16.5
26.00	3.37	-0.11	0.00	3.26	.40	.85	1208	797.3	334.8	-15.4
26.50	3.41	-0.09	0.00	3.31	.40	.85	1211	797.6	333.6	-14.3
27.00	3.54	-0.08	0.00	3.46	.36	.83	1218	797.9	332.4	-13.2
27.50	3.71	-0.05	0.01	3.66	.36	.81	1226	798.3	331.2	-12.2
28.00	3.78	-0.03	0.01	3.75	.35	.80	1233	798.7	330.1	-11.1
28.50	4.65	-0.02	0.01	4.65	.26	.71	1272	799.1	328.9	-10.0
29.00	3.88	0.00	0.01	3.89	.35	.79	1238	799.5	327.7	-9.0
29.50	3.36	0.02	0.02	3.40	.42	.86	1211	800.0	326.5	-7.9
30.00	3.20	0.04	0.02	3.26	.45	.88	1201	800.5	325.4	-6.8
30.50	3.07	0.06	0.02	3.15	.47	.90	1193	801.0	324.2	-5.8
31.00	3.04	0.08	0.03	3.14	.48	.90	1191	801.6	323.1	-4.7
31.50	2.95	0.10	0.03	3.08	.50	.91	1187	802.2	321.9	-3.6
32.00	2.89	0.11	0.03	3.04	.51	.92	1184	802.8	320.8	-2.6
32.50	2.78	0.13	0.04	2.95	.53	.94	1179	803.4	319.6	-1.5
33.00	2.69	0.15	0.04	2.88	.54	.95	1175	804.0	318.5	-0.5
40933.20	2.54	0.15	0.04	2.74	-16.57	-16.97	1167	804.3	318.0	-0.1
33.40	2.51	0.16	0.04	2.71	.57	.98	1166	804.6	317.6	0.4
33.60	2.80	0.16	0.04	3.00	.53	.93	1180	804.8	317.1	0.8
33.80	2.76	0.17	0.04	2.98	.54	.94	1179	805.1	316.7	1.2
34.00	3.05	0.18	0.04	3.27	.50	.90	1195	805.4	316.2	1.6
34.20	3.17	0.18	0.04	3.40	.48	.88	1204	805.7	315.8	2.1
34.40	3.79	0.19	0.05	4.02	.39	.79	1241	806.0	315.3	2.5
34.60	4.08	0.19	0.05	4.32	.35	.75	1258	806.2	314.9	2.9
34.80	3.72	0.20	0.05	3.96	.40	.81	1236	806.5	314.4	3.3
35.00	2.86	0.20	0.05	3.11	.52	.92	1192	806.8	314.0	3.7
40935.50	2.44	0.21	0.05	2.70	-16.59	-16.98	1165	807.6	312.8	4.8
36.00	2.05	0.22	0.05	2.33	.68	-17.05	1135	808.3	311.7	5.8
36.50	1.86	0.23	0.06	2.14	.73	.08	1117	809.1	310.6	6.9
37.00	1.61	0.24	0.06	1.91	.79	.13	1098	809.9	309.5	7.9
37.50	1.49	0.24	0.06	1.79	.83	.15	1086	810.7	308.3	8.9
38.00	1.37	0.25	0.06	1.68	.86	.17	1075	811.5	307.2	10.0
38.50	1.20	0.25	0.07	1.52	.91	.22	1059	812.3	306.1	11.0
39.00	1.27	0.25	0.07	1.59	.90	.20	1066	813.2	305.0	12.1
39.50	1.42	0.25	0.07	1.74	.86	.17	1081	814.0	303.9	13.1
40.00	1.36	0.24	0.07	1.67	.88	.19	1075	814.9	302.7	14.1
40.50	1.33	0.23	0.07	1.63	.89	.20	1071	815.7	301.6	15.2
41.00	1.25	0.22	0.08	1.55	.92	.21	1061	816.6	300.5	16.2
41.50	1.14	0.21	0.08	1.44	.96	.24	1048	817.5	299.4	17.2
42.00	1.07	0.20	0.08	1.35	.99	.27	1037	818.3	298.3	18.2
42.50	0.92	0.18	0.08	1.18	-17.06	.32	1014	819.2	297.2	19.3
43.00	0.88	0.16	0.08	1.12	.08	.34	1005	820.1	296.1	20.3
43.50	0.84	0.14	0.08	1.06	.11	.36	995	821.0	295.0	21.3
44.00	0.86	0.11	0.08	1.05	.12	.36	993	821.8	293.8	22.3
44.50	0.85	0.08	0.09	1.02	.13	.37	987	822.7	292.7	23.3
45.00	0.85	0.03	0.09	.97	.16	.38	978	823.6	291.6	24.4
45.50	0.83	0.00	0.09	.92	.18	.39	971	824.5	290.5	25.4
46.00	0.82	0.00	0.09	.91	.19	.39	968	825.3	289.4	26.4
46.50	0.81	0.00	0.09	.90	.19	.39	966	826.2	288.3	27.4
47.00	0.83	0.00	0.09	.92	.18	.37	971	827.0	287.2	28.4
47.50	0.83	0.00	0.09	.92	.19	.37	970	827.9	286.1	29.4
48.00	0.84	0.00	0.09	.93	.19	.38	968	828.7	284.9	30.4
48.50	0.88	0.00	0.09	.96	.17	.36	973	829.5	283.8	31.4
49.00	0.84	0.00	0.09	.93	.19	.38	966	830.3	282.7	32.4
49.50	0.79	0.00	0.09	.88	.21	.39	956	831.1	281.6	33.4
50.00	0.80	0.00	0.09	.88	.21	.39	955	831.9	280.5	34.4
50.50	0.68	0.00	0.09	.77	.27	.45	926	832.6	279.4	35.4
51.00	0.68	0.00	0.09	.76	.27	.44	928	833.4	278.2	36.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_O$ (deg)	$\delta_\pi - \delta_O$ (deg)
40951.50	0.68	0.00	0.09	.76	-17.27	-17.43	930	834.1	277.1	37.4
52.00	0.69	0.00	0.09	.78	.26	.42	933	834.8	276.0	38.4
52.50	0.63	0.00	0.08	.71	.30	.46	909	835.5	274.9	39.4
53.00	0.61	0.00	0.08	.69	.32	.47	900	836.2	273.7	40.4
53.50	0.61	0.00	0.08	.69	.32	.48	895	836.8	272.6	41.4
54.00	0.56	0.04	0.08	.68	.33	.50	889	837.4	271.5	42.4
54.50	0.59	0.08	0.08	.74	.30	.46	907	838.0	270.4	43.3
55.00	0.93	0.11	0.08	1.11	.12	.29	991	838.6	269.2	44.3
55.50	0.82	0.13	0.08	1.03	.15	.31	977	839.2	268.1	45.3
56.00	0.51	0.16	0.08	.75	.28	.43	910	839.7	266.9	46.3
56.50	0.46	0.18	0.07	.72	.30	.44	906	840.2	265.8	47.3
57.00	0.47	0.20	0.07	.74	.29	.43	906	840.7	264.7	48.3
57.50	0.42	0.22	0.07	.71	.30	.44	897	841.1	263.5	49.2
58.00	0.35	0.23	0.07	.65	.33	.47	877	841.5	262.4	50.2
58.50	0.36	0.24	0.07	.66	.32	.45	882	841.9	261.2	51.2
59.00	0.36	0.24	0.07	.67	.31	.44	886	842.3	260.0	52.1
59.50	0.40	0.24	0.07	.71	.29	.41	899	842.6	258.9	53.1
60.00	0.38	0.24	0.06	.69	.30	.42	891	843.0	257.7	54.1
60.50	0.39	0.24	0.06	.70	.29	.41	893	843.2	256.5	55.0
61.00	0.38	0.24	0.06	.68	.30	.43	884	843.5	255.4	56.0
61.50	0.39	0.23	0.06	.68	.30	.43	881	843.7	254.2	57.0
62.00	0.37	0.23	0.06	.66	.32	.45	869	843.9	253.0	57.9
62.50	0.39	0.22	0.06	.66	.32	.45	866	844.0	251.8	58.9
63.00	0.37	0.21	0.05	.63	.33	.46	854	844.1	250.6	59.8
63.50	0.41	0.20	0.05	.66	.31	.43	868	844.2	249.4	60.8
64.00	0.43	0.19	0.05	.66	.30	.43	869	844.3	248.2	61.7
64.50	0.49	0.17	0.05	.72	.27	.39	887	844.3	246.9	62.7
65.00	0.51	0.16	0.05	.71	.27	.40	881	844.3	245.7	63.6
65.50	0.55	0.14	0.04	.74	.25	.38	890	844.3	244.5	64.6
66.00	0.57	0.12	0.04	.73	.26	.38	886	844.2	243.2	65.5
66.50	0.61	0.11	0.04	.76	.24	.36	895	844.1	241.9	66.4
67.00	0.66	0.09	0.04	.78	.22	.35	900	844.0	240.7	67.4
67.50	0.67	0.07	0.03	.77	.23	.35	897	843.8	239.4	68.3
68.00	0.69	0.05	0.03	.77	.22	.35	897	843.6	238.1	69.2
68.50	0.66	0.03	0.03	.72	.25	.38	880	843.4	236.8	70.2
69.00	0.65	0.01	0.03	.69	.27	.40	867	843.1	235.4	71.1
69.50	0.65	-0.01	0.02	.66	.29	.42	853	842.8	234.1	72.0
70.00	0.72	-0.04	0.02	.70	.26	.40	866	842.5	232.7	72.9
70.50	0.77	-0.05	0.02	.73	.24	.37	877	842.1	231.3	73.8
71.00	0.84	-0.07	0.01	.79	.20	.35	894	841.8	229.9	74.7
71.50	0.81	-0.09	0.01	.73	.24	.39	872	841.4	228.5	75.6
72.00	0.83	-0.11	0.01	.73	.24	.39	872	840.9	227.0	76.5
72.50	0.80	-0.13	0.01	.68	.26	.41	855	840.4	225.5	77.4
73.00	0.83	-0.14	0.00	.69	.25	.40	858	839.9	224.0	78.3
73.50	0.82	-0.16	0.00	.66	.27	.42	847	839.4	222.4	79.2
74.00	0.85	-0.18	0.00	.66	.27	.42	846	838.9	220.5	80.1
74.50	0.90	-0.20	0.00	.69	.25	.40	857	838.3	219.2	81.0
75.00	0.92	-0.22	-0.01	.69	.24	.39	857	837.7	217.5	81.9
75.50	0.97	-0.24	-0.01	.72	.22	.38	867	837.1	215.8	82.7
76.00	1.05	-0.26	-0.01	.77	.19	.36	883	836.4	214.0	83.6
76.50	0.99	-0.29	-0.01	.69	.24	.40	855	835.7	212.1	84.4
77.00	1.04	-0.31	-0.02	.72	.21	.37	868	835.0	210.2	85.3
77.50	1.07	-0.33	-0.02	.72	.21	.36	870	834.3	208.2	86.1
78.00	1.07	-0.35	-0.02	.70	.22	.37	862	833.6	206.1	86.9
78.50	1.51	-0.37	-0.02	1.11	.02	.19	970	832.8	203.9	87.7
79.00	1.67	-0.39	-0.03	1.25	-16.97	.16	997	832.0	201.6	88.5
79.50	1.69	-0.41	-0.03	1.25	.97	.16	997	831.2	199.1	89.3
80.00	1.56	-0.43	-0.03	1.11	-17.02	.21	970	830.4	196.5	90.1
80.50	1.59	-0.45	-0.03	1.11	.01	.20	969	829.5	193.7	90.9
81.00	1.41	-0.46	-0.04	.91	.09	.28	923	828.7	190.8	91.6

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
40981.50	1.49	-0.48	-0.04	.97	-17.06	-17.26	938	827.8	187.6	92.3
82.00	1.51	-0.50	-0.04	.98	.06	.26	941	826.9	184.2	93.0
82.50	1.54	-0.51	-0.04	.98	.06	.26	941	826.0	180.5	93.6
83.00	1.59	-0.53	-0.05	1.02	.03	.24	950	825.1	176.4	94.3
83.50	1.59	-0.54	-0.05	1.00	.04	.25	946	824.1	172.0	94.8
84.00	1.57	-0.56	-0.05	.96	.06	.27	937	823.2	167.2	95.3
84.50	1.44	-0.58	-0.05	.81	.13	.33	897	822.2	162.0	95.8
85.00	1.49	-0.59	-0.05	.84	.11	.32	906	821.2	156.3	96.2
85.50	1.46	-0.61	-0.06	.80	.12	.34	895	820.2	150.1	96.5
86.00	1.49	-0.62	-0.06	.81	.11	.32	900	819.3	143.6	96.7
86.50	1.52	-0.64	-0.06	.82	.11	.31	904	818.2	136.6	96.8
87.00	1.57	-0.65	-0.06	.86	.08	.30	915	817.2	129.4	96.8
87.50	1.60	-0.67	-0.06	.87	.08	.29	918	816.2	122.0	96.7
88.00	1.65	-0.68	-0.07	.91	.05	.27	929	815.2	114.7	96.5
88.50	1.68	-0.69	-0.07	.92	.05	.27	932	814.2	107.6	96.1
89.00	1.73	-0.70	-0.07	.96	.02	.26	942	813.1	100.8	95.7
89.50	1.73	-0.71	-0.07	.95	.03	.26	940	812.1	94.4	95.1
90.00	1.78	-0.72	-0.07	.99	.01	.25	949	811.0	88.4	94.5
90.50	1.78	-0.73	-0.07	.98	.01	.26	947	810.0	82.9	93.8
91.00	1.73	-0.73	-0.07	.92	.03	.28	934	809.0	77.8	93.0
91.50	1.75	-0.74	-0.07	.93	.02	.28	937	807.9	73.2	92.2
92.00	1.75	-0.75	-0.07	.93	.02	.27	938	806.9	69.0	91.3
92.50	1.67	-0.75	-0.08	.84	.06	.31	917	805.8	65.1	90.4
93.00	1.67	-0.76	-0.08	.83	.07	.31	914	804.8	61.5	89.4
93.50	1.59	-0.77	-0.08	.74	.11	.36	889	803.7	58.2	88.4
94.00	1.64	-0.77	-0.08	.79	.08	.33	905	802.7	55.1	87.4
94.50	1.69	-0.78	-0.08	.83	.06	.32	916	801.7	52.3	86.4
95.00	1.69	-0.78	-0.08	.82	.06	.33	913	800.7	49.6	85.3
95.50	1.79	-0.79	-0.08	.92	.01	.27	939	799.6	47.1	84.3
96.00	1.84	-0.79	-0.08	.97	-16.98	.24	951	798.6	44.7	83.2
96.50	2.01	-0.79	-0.08	1.14	.91	.20	982	797.6	42.5	82.1
97.00	2.11	-0.79	-0.08	1.24	.87	.19	999	796.6	40.4	81.0
97.50	2.37	-0.79	-0.08	1.50	.78	.11	1035	795.7	38.3	79.9
98.00	2.63	-0.80	-0.08	1.75	.71	.06	1065	794.7	36.4	78.8
98.50	2.39	-0.80	-0.08	1.51	.77	.12	1038	793.7	34.5	77.6
99.00	2.30	-0.80	-0.08	1.42	.80	.15	1026	792.8	32.7	76.5
99.50	2.22	-0.80	-0.08	1.34	.82	.18	1015	791.9	31.0	75.4
41000.00	2.21	-0.80	-0.08	1.33	.82	.18	1014	791.0	29.3	74.2
00.50	2.23	-0.79	-0.08	1.36	.81	.18	1018	790.1	27.7	73.1
01.00	2.25	-0.79	-0.08	1.38	.80	.18	1022	789.2	26.1	71.9
01.50	2.27	-0.78	-0.08	1.41	.79	.17	1025	788.3	24.6	70.8
02.00	2.34	-0.78	-0.08	1.48	.77	.15	1032	787.5	23.1	69.6
02.50	2.35	-0.77	-0.08	1.51	.75	.14	1036	786.7	21.6	68.4
03.00	2.42	-0.76	-0.08	1.58	.73	.13	1044	785.9	20.2	67.3
03.50	2.46	-0.75	-0.08	1.63	.71	.12	1050	785.1	18.8	66.1
04.00	2.48	-0.75	-0.08	1.65	.71	.11	1051	784.3	17.4	64.9
04.50	2.49	-0.74	-0.08	1.68	.70	.10	1052	783.6	16.1	63.8
05.00	2.51	-0.73	-0.08	1.70	.69	.10	1054	782.9	14.7	62.6
05.50	2.50	-0.72	-0.07	1.70	.69	.11	1055	782.2	13.4	61.4
06.00	3.00	-0.72	-0.07	2.20	.57	-16.73	1101	781.6	12.1	60.2
06.50	3.02	-0.71	-0.07	2.24	.56	.72	1103	780.9	10.9	59.0
41007.00	3.32	-0.70	-0.07	2.55	-16.50	-16.67	1126	780.3	9.6	57.8
07.20	3.79	-0.70	-0.07	3.02	.42	.59	1158	780.1	9.1	57.4
07.40	3.12	-0.69	-0.07	2.35	.52	.70	1115	779.9	8.6	56.9
07.60	3.10	-0.69	-0.07	2.34	.53	.70	1113	779.7	8.1	56.4
07.80	3.40	-0.68	-0.07	2.65	.47	.64	1137	779.4	7.7	55.9
08.00	3.55	-0.68	-0.07	2.80	.44	.61	1148	779.2	7.2	55.5
08.20	4.50	-0.67	-0.07	3.76	.31	.49	1200	779.0	6.7	55.0
08.40	3.67	-0.67	-0.07	2.93	.42	.60	1155	778.8	6.2	54.5

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41008.60	3.16	-0.67	-0.07	2.42	-16.50	-16.69	1120	778.6	5.7	54.0
08.80	2.98	-0.66	-0.07	2.24	.54	.73	1104	778.4	5.2	53.6
09.00	2.79	-0.65	-0.07	2.07	.58	.76	1089	778.2	4.8	53.1
41009.50	2.61	-0.64	-0.07	1.90	-16.62	-16.81	1072	777.8	3.6	51.9
10.00	2.51	-0.63	-0.06	1.82	.64	.83	1064	777.4	2.4	50.7
10.50	2.57	-0.61	-0.06	1.89	.63	.81	1068	777.0	1.2	49.5
11.00	2.54	-0.60	-0.06	1.88	.64	.82	1064	776.6	0.1	48.3
11.50	2.52	-0.59	-0.06	1.88	.64	.82	1063	776.3	358.9	47.1
12.00	2.47	-0.58	-0.06	1.84	.65	.83	1058	776.0	357.8	45.9
12.50	2.45	-0.56	-0.05	1.84	.65	.84	1056	775.8	356.7	44.7
13.00	2.41	-0.55	-0.05	1.81	.66	.85	1053	775.5	355.6	43.5
13.50	2.41	-0.53	-0.05	1.83	.65	.84	1055	775.4	354.5	42.3
14.00	2.60	-0.52	-0.05	2.03	.61	.80	1072	775.2	353.3	41.1
14.50	2.58	-0.50	-0.05	2.03	.61	.80	1072	775.1	352.2	39.9
15.00	2.48	-0.48	-0.04	1.96	.63	.82	1063	775.0	351.2	38.7
15.50	2.28	-0.47	-0.04	1.77	.68	.87	1044	774.9	350.1	37.5
16.00	2.13	-0.45	-0.04	1.65	.72	.90	1030	774.9	349.0	36.3
16.50	2.01	-0.43	-0.04	1.54	.75	.93	1017	774.9	347.9	35.1
17.00	1.89	-0.41	-0.03	1.44	.78	.96	1006	775.0	346.8	33.9
17.50	1.77	-0.40	-0.03	1.34	.82	.99	993	775.1	345.8	32.7
18.00	1.75	-0.38	-0.03	1.34	.82	-17.00	993	775.2	344.7	31.5
18.50	1.82	-0.36	-0.03	1.43	.79	-16.97	1004	775.3	343.6	30.3
19.00	1.77	-0.34	-0.03	1.41	.80	.98	1000	775.5	342.6	29.1
19.50	1.71	-0.33	-0.02	1.36	.82	.99	992	775.7	341.5	27.9
20.00	1.67	-0.31	-0.02	1.34	.83	-17.00	989	776.0	340.5	26.7
20.50	1.60	-0.29	-0.02	1.30	.84	.02	985	776.2	339.4	25.5
21.00	1.51	-0.27	-0.02	1.23	.87	.04	975	776.5	338.4	24.2
21.50	1.40	-0.25	-0.01	1.13	.91	.08	960	776.9	337.4	23.0
22.00	1.49	-0.23	-0.01	1.25	.87	.04	974	777.2	336.3	21.8
22.50	1.63	-0.21	-0.01	1.41	.82	-16.98	993	777.6	335.3	20.6
23.00	1.68	-0.19	-0.01	1.48	.79	.97	1004	778.0	334.3	19.4
23.50	1.95	-0.17	0.00	1.78	.71	.89	1035	778.5	333.2	18.2
24.00	1.94	-0.15	0.00	1.79	.71	.88	1035	779.0	332.2	17.0
24.50	1.70	-0.13	0.00	1.57	.77	.94	1013	779.5	331.2	15.8
25.00	1.51	-0.11	0.00	1.40	.82	.99	995	780.0	330.1	14.5
25.50	1.43	-0.10	0.01	1.34	.85	-17.01	986	780.5	329.1	13.3
26.00	1.39	-0.08	0.01	1.33	.86	.02	982	781.1	328.1	12.1
26.50	1.36	-0.06	0.01	1.32	.87	.02	978	781.7	327.1	10.9
27.00	1.28	-0.04	0.01	1.25	.90	.05	969	782.3	326.1	9.7
27.50	1.22	-0.02	0.02	1.22	.91	.06	965	783.0	325.0	8.5
28.00	1.22	-0.01	0.02	1.23	.91	.05	965	783.6	324.0	7.3
28.50	1.22	0.01	0.02	1.25	.91	.04	966	784.3	323.0	6.0
29.00	1.22	0.02	0.02	1.26	.91	.04	966	785.0	322.0	4.8
29.50	1.24	0.03	0.03	1.30	.90	.03	972	785.8	321.0	3.6
30.00	1.32	0.05	0.03	1.40	.87	.00	984	786.5	320.0	2.4
30.50	1.16	0.06	0.03	1.25	.92	.05	965	787.3	319.0	1.2
31.00	0.98	0.07	0.03	1.08	.99	.10	939	788.0	317.9	0.0
31.50	0.88	0.08	0.03	.99	-17.03	.13	924	788.8	316.9	-1.3
32.00	0.85	0.09	0.04	.98	.04	.14	922	789.6	315.9	-2.5
32.50	0.86	0.09	0.04	.98	.04	.14	922	790.4	314.9	-3.7
33.00	0.89	0.09	0.04	1.01	.03	.12	927	791.3	313.9	-4.9
33.50	0.89	0.08	0.04	1.01	.03	.12	926	792.1	312.9	-6.1
34.00	0.98	0.07	0.04	1.09	.00	.09	938	793.0	311.8	-7.4
34.50	0.98	0.06	0.04	1.09	.01	.10	937	793.8	310.8	-8.6
35.00	1.04	0.05	0.04	1.14	-16.99	.08	944	794.7	309.8	-9.8
35.50	1.00	0.03	0.05	1.08	-17.02	.10	934	795.6	308.8	-11.0
36.00	0.88	0.01	0.05	.94	.08	.16	910	796.5	307.8	-12.2
36.50	0.97	0.00	0.05	1.02	.05	.13	923	797.4	306.7	-13.5
37.00	0.87	0.00	0.05	.92	.10	.17	905	798.3	305.7	-14.7

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41037.50	0.81	0.00	0.05	.86	-17.13	-17.19	893	799.2	304.7	-15.9
38.00	0.79	0.00	0.05	.85	.13	.19	891	800.1	303.7	-17.1
38.50	0.76	0.00	0.05	.81	.15	.21	884	801.0	302.7	-18.4
39.00	0.69	0.00	0.05	.75	.18	.23	871	801.9	301.6	-19.6
39.50	0.60	0.00	0.06	.66	.24	.29	845	802.8	300.6	-20.8
40.00	0.65	0.00	0.06	.70	.22	.26	856	803.8	299.6	-22.0
40.50	0.66	0.00	0.06	.72	.21	.25	860	804.7	298.5	-23.2
41.00	0.84	0.00	0.06	.90	.12	.16	899	805.6	297.5	-24.5
41.50	0.93	0.00	0.06	.99	.08	.13	914	806.5	296.4	-25.7
42.00	0.90	0.00	0.06	.96	.10	.14	909	807.4	295.4	-26.9
42.50	0.85	0.00	0.06	.90	.12	.16	899	808.3	294.3	-28.1
43.00	0.66	0.00	0.06	.72	.21	.24	858	809.2	293.3	-29.4
43.50	0.58	0.00	0.06	.64	.26	.29	833	810.1	292.2	-30.6
44.00	0.50	0.00	0.06	.56	.33	.35	798	811.0	291.2	-31.8
44.50	0.60	0.00	0.06	.66	.26	.28	834	811.9	290.1	-33.0
45.00	1.12	0.00	0.06	1.18	.01	.03	948	812.8	289.1	-34.3
45.50	0.92	0.00	0.06	.98	.10	.11	911	813.6	288.0	-35.5
46.00	0.79	0.00	0.06	.85	.16	.17	884	814.5	286.9	-36.7
46.50	0.71	0.00	0.06	.77	.19	.21	866	815.3	285.8	-37.9
47.00	0.72	0.00	0.06	.77	.20	.21	865	816.2	284.7	-39.1
47.50	0.70	0.00	0.06	.75	.21	.22	857	817.0	283.6	-40.4
48.00	0.68	0.00	0.06	.73	.22	.22	854	817.8	282.5	-41.6
48.50	0.63	0.00	0.06	.69	.24	.24	845	818.5	281.4	-42.8
49.00	0.69	0.00	0.06	.75	.20	.20	867	819.3	280.3	-44.0
49.50	0.70	0.00	0.05	.76	.19	.19	868	820.0	279.2	-45.2
50.00	0.82	0.00	0.05	.87	.14	.14	894	820.8	278.1	-46.5
50.50	1.22	0.00	0.05	1.27	-16.98	-16.98	962	821.5	276.9	-47.7
51.00	1.10	0.00	0.05	1.15	-17.03	-17.02	940	822.2	275.8	-48.9
51.50	1.07	0.00	0.05	1.12	.04	.03	937	822.8	274.6	-50.1
52.00	0.82	0.00	0.05	.87	.14	.13	886	823.4	273.4	-51.3
52.50	0.76	0.00	0.05	.81	.17	.16	869	824.1	272.3	-52.6
53.00	0.78	0.00	0.05	.82	.17	.15	873	824.7	271.1	-53.8
53.50	0.69	0.00	0.04	.74	.21	.19	852	825.2	269.9	-55.0
54.00	0.69	0.00	0.04	.73	.21	.20	850	825.8	268.6	-56.2
54.50	0.68	0.00	0.04	.72	.22	.20	845	826.3	267.4	-57.4
55.00	0.78	0.00	0.04	.82	.16	.14	874	826.8	266.1	-58.6
41055.20	0.81	0.00	0.04	.85	-17.14	-17.13	883	827.0	265.6	-59.1
55.40	0.98	0.00	0.04	1.02	.07	.05	922	827.1	265.1	-59.6
55.60	1.15	0.00	0.04	1.19	.00	-16.98	955	827.3	264.6	-60.1
55.80	1.82	0.00	0.04	1.85	-16.81	.79	1037	827.5	264.1	-60.6
56.00	2.15	0.00	0.04	2.19	.74	.72	1063	827.7	263.6	-61.0
56.20	1.84	0.00	0.03	1.87	.81	.79	1034	827.8	263.1	-61.5
56.40	1.52	0.00	0.03	1.55	.89	.87	999	828.0	262.5	-62.0
56.60	1.37	0.00	0.03	1.40	.93	.91	981	828.1	262.0	-62.5
56.80	1.22	0.00	0.03	1.25	.98	.96	959	828.3	261.5	-63.0
57.00	1.23	0.00	0.03	1.26	.98	.95	961	828.4	260.9	-63.5
57.20	1.24	0.00	0.03	1.27	.97	.95	962	828.6	260.4	-63.9
57.40	1.09	0.00	0.03	1.12	-17.03	-17.00	937	828.7	259.9	-64.4
57.60	0.77	0.00	0.03	.80	.17	.14	863	828.9	259.3	-64.9
57.80	0.79	0.00	0.03	.82	.16	.13	871	829.0	258.8	-65.4
41058.00	0.79	0.00	0.03	.81	-17.16	-17.14	868	829.1	258.2	-65.9
58.50	0.75	0.00	0.03	.78	.17	.15	861	829.4	256.8	-67.1
59.00	0.80	0.00	0.02	.82	.15	.12	873	829.7	255.3	-68.3
59.50	0.85	0.00	0.02	.87	.12	.10	886	829.9	253.8	-69.5
60.00	0.82	0.00	0.02	.84	.14	.11	876	830.1	252.3	-70.6
60.50	0.79	0.00	0.02	.81	.15	.12	868	830.3	250.8	-71.8
61.00	0.79	0.00	0.02	.81	.14	.12	871	830.4	249.2	-73.0
61.50	0.77	0.00	0.01	.78	.16	.13	862	830.5	247.5	-74.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41062.00	0.82	0.00	0.01	.84	-17.12	-17.10	881	830.6	245.8	-75.4
62.50	1.04	0.00	0.01	1.05	.03	.00	930	830.6	244.0	-76.5
63.00	1.33	0.00	0.01	1.34	-16.93	-16.90	977	830.7	242.1	-77.7
63.50	1.08	0.00	0.01	1.09	-17.01	.98	933	830.6	240.2	-78.8
64.00	0.72	0.00	0.01	.73	.18	-17.15	843	830.6	238.2	-80.0
64.50	0.76	0.00	0.00	.76	.16	.13	853	830.5	236.1	-81.1
65.00	0.88	0.00	0.00	.88	.09	.06	889	830.4	233.8	-82.2
65.50	0.68	0.00	0.00	.68	.20	.17	829	830.3	231.5	-83.3
66.00	0.69	0.00	0.00	.69	.18	.16	836	830.2	228.9	-84.4
66.50	0.71	0.00	0.00	.70	.18	.15	840	830.0	226.3	-85.5
67.00	0.70	-0.01	-0.01	.68	.19	.16	832	829.8	223.4	-86.6
67.50	0.72	-0.03	-0.01	.67	.19	.17	827	829.5	220.3	-87.6
68.00	0.79	-0.05	-0.01	.72	.16	.14	842	829.3	217.0	-88.6
68.50	0.80	-0.07	-0.01	.72	.16	.14	841	829.0	213.3	-89.6
69.00	0.85	-0.09	-0.02	.74	.15	.13	845	828.7	209.4	-90.5
69.50	0.90	-0.11	-0.02	.76	.14	.12	848	828.3	205.1	-91.4
70.00	0.97	-0.13	-0.02	.82	.10	.08	868	828.0	200.3	-92.3
70.50	0.86	-0.15	-0.03	.68	.18	.16	824	827.6	195.1	-93.1
71.00	0.86	-0.17	-0.03	.65	.20	.18	812	827.2	189.5	-93.8
71.50	0.88	-0.19	-0.03	.66	.19	.17	815	826.7	183.3	-94.4
72.00	0.90	-0.21	-0.03	.66	.18	.17	818	826.3	176.7	-95.0
72.50	0.93	-0.23	-0.04	.66	.18	.17	819	825.8	169.7	-95.4
73.00	1.06	-0.25	-0.04	.77	.12	.10	854	825.3	162.4	-95.7
73.50	1.21	-0.27	-0.04	.90	.05	.04	891	824.8	154.9	-95.9
74.00	1.05	-0.29	-0.04	.72	.14	.13	837	824.2	147.5	-96.0
74.50	1.08	-0.31	-0.05	.72	.14	.13	839	823.7	140.2	-96.0
75.00	1.10	-0.33	-0.05	.73	.14	.13	839	823.1	133.3	-95.8
75.50	1.17	-0.35	-0.05	.73	.13	.13	839	822.5	126.7	-95.6
76.00	1.18	-0.36	-0.05	.76	.11	.11	852	821.9	120.6	-95.2
76.50	1.21	-0.38	-0.06	.77	.11	.10	854	821.2	115.0	-94.8
77.00	1.23	-0.40	-0.06	.77	.11	.11	850	820.6	109.9	-94.3
77.50	1.62	-0.42	-0.06	1.14	-16.95	-16.95	938	819.9	105.2	-93.7
78.00	1.76	-0.44	-0.06	1.25	.91	.91	957	819.2	101.0	-93.1
78.50	1.47	-0.46	-0.06	.95	-17.03	-17.03	894	818.5	97.0	-92.5
79.00	1.44	-0.48	-0.07	.90	.05	.05	883	817.8	93.5	-91.8
79.50	1.44	-0.49	-0.07	.88	.06	.06	879	817.1	90.1	-91.1
80.00	1.47	-0.51	-0.07	.89	.05	.06	882	816.3	87.1	-90.4
80.50	1.52	-0.53	-0.07	.92	.03	.05	891	815.6	84.2	-89.6
81.00	1.57	-0.54	-0.07	.96	.01	.03	901	814.8	81.5	-88.8
81.50	1.54	-0.56	-0.08	.91	.04	.05	889	814.1	79.0	-88.0
82.00	1.54	-0.57	-0.08	.89	.04	.06	885	813.3	76.7	-87.2
82.50	1.54	-0.58	-0.08	.88	.05	.07	884	812.5	74.4	-86.4
83.00	1.59	-0.59	-0.08	.92	.02	.04	897	811.7	72.3	-85.6
83.50	1.64	-0.60	-0.08	.95	.01	.03	905	810.9	70.3	-84.7
84.00	1.71	-0.61	-0.09	1.01	-16.98	.01	919	810.1	68.3	-83.9
84.50	1.73	-0.62	-0.09	1.02	.98	.01	922	809.3	66.5	-83.0
85.00	1.81	-0.63	-0.09	1.08	.95	-16.98	935	808.5	64.7	-82.1
85.50	1.90	-0.64	-0.09	1.17	.92	.95	952	807.6	62.9	-81.3
86.00	2.05	-0.65	-0.09	1.31	.87	.91	976	806.8	61.2	-80.4
86.50	2.07	-0.66	-0.10	1.32	.86	.91	978	806.0	59.6	-79.5
87.00	2.14	-0.66	-0.10	1.39	.84	.88	991	805.1	58.0	-78.6
87.50	2.19	-0.67	-0.10	1.42	.82	.87	999	804.3	56.5	-77.7
88.00	2.25	-0.67	-0.10	1.48	.81	.83	1005	803.5	55.0	-76.8
88.50	2.66	-0.68	-0.10	1.88	.71	.77	1051	802.6	53.5	-75.9
89.00	2.75	-0.68	-0.10	1.96	.69	.75	1061	801.8	52.0	-75.0
89.50	2.71	-0.69	-0.10	1.92	.70	.76	1056	801.0	50.6	-74.1
90.00	2.10	-0.70	-0.11	1.30	.87	.93	980	800.2	49.2	-73.2
90.50	1.82	-0.70	-0.11	1.02	.97	-17.03	931	799.3	47.9	-72.3
91.00	1.75	-0.70	-0.11	.95	-17.00	.06	918	798.5	46.5	-71.4
91.50	1.71	-0.70	-0.11	.90	.02	.09	908	797.7	45.2	-70.5

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41092.00	1.72	-0.70	-0.11	.90	-17.02	-17.08	910	796.9	43.9	-69.6
92.50	1.67	-0.70	-0.11	.86	.04	.11	901	796.1	42.6	-68.6
93.00	1.65	-0.70	-0.11	.83	.05	.13	895	795.3	41.3	-67.7
93.50	1.62	-0.70	-0.11	.81	.06	.14	891	794.6	40.1	-66.8
94.00	1.52	-0.70	-0.11	.70	.13	.20	859	793.8	38.8	-65.8
94.50	1.49	-0.70	-0.11	.68	.14	.22	854	793.0	37.6	-64.9
95.00	1.54	-0.70	-0.11	.73	.11	.19	871	792.3	36.3	-64.0
95.50	1.54	-0.70	-0.12	.72	.12	.20	870	791.5	35.1	-63.1
96.00	1.56	-0.70	-0.12	.74	.10	.19	878	790.8	33.9	-62.1
96.50	1.50	-0.70	-0.12	.69	.14	.22	863	790.1	32.7	-61.2
97.00	1.52	-0.69	-0.12	.71	.12	.21	871	789.4	31.5	-60.2
97.50	1.50	-0.69	-0.12	.70	.13	.23	869	788.7	30.4	-59.3
98.00	1.49	-0.69	-0.12	.69	.14	.23	868	788.0	29.2	-58.4
98.50	1.48	-0.68	-0.12	.68	.14	.24	868	787.4	28.0	-57.4
99.00	1.49	-0.67	-0.12	.70	.13	.22	877	786.7	26.9	-56.5
99.50	1.47	-0.67	-0.12	.68	.15	.25	872	786.1	25.7	-55.5
41100.00	1.47	-0.66	-0.12	.70	.14	.24	879	785.5	24.6	-54.6
00.50	1.55	-0.65	-0.11	.79	.08	.20	905	784.9	23.4	-53.6
01.00	1.58	-0.64	-0.11	.82	.07	.19	913	784.3	22.3	-52.7
01.50	1.68	-0.63	-0.11	.93	.01	.15	940	783.7	21.2	-51.7
02.00	1.81	-0.62	-0.11	1.07	-16.95	.09	967	783.2	20.0	-50.8
02.50	1.70	-0.61	-0.11	.97	-17.00	.13	949	782.7	18.9	-49.8
03.00	1.61	-0.60	-0.11	.90	.03	.16	936	782.2	17.8	-48.6
03.50	1.91	-0.59	-0.11	1.21	-16.90	.04	991	781.7	16.7	-47.9
04.00	2.00	-0.58	-0.11	1.31	.87	.02	1008	781.2	15.6	-46.9
04.50	2.19	-0.58	-0.11	1.51	.80	-16.96	1033	780.7	14.4	-46.0
05.00	2.25	-0.57	-0.11	1.58	.78	.94	1042	780.3	13.3	-45.0
05.50	2.10	-0.55	-0.11	1.44	.93	.99	1026	779.9	12.2	-44.0
06.00	1.90	-0.54	-0.11	1.25	.90	-17.05	1001	779.5	11.1	-43.1
06.50	1.74	-0.54	-0.11	1.10	.95	.11	979	779.1	10.0	-42.1
07.00	1.71	-0.52	-0.10	1.08	.96	.12	976	778.7	8.9	-41.1
07.50	1.68	-0.50	-0.10	1.07	.97	.12	975	778.4	7.8	-40.1
08.00	1.61	-0.49	-0.10	1.02	.99	.15	968	778.0	6.7	-39.2
08.50	1.60	-0.49	-0.10	1.02	-17.00	.15	969	777.7	5.6	-38.2
09.00	1.59	-0.48	-0.10	1.02	.00	.15	968	777.4	4.6	-37.2
09.50	1.56	-0.46	-0.10	1.00	.01	.16	966	777.2	3.5	-36.2
10.00	1.53	-0.45	-0.10	.98	.02	.18	963	776.9	2.4	-35.3
10.50	1.52	-0.44	-0.10	.99	.02	.18	966	776.7	1.3	-34.3
11.00	1.49	-0.42	-0.10	.97	.03	.19	963	776.5	0.2	-33.3
11.50	1.43	-0.42	-0.09	.92	.06	.21	955	776.3	359.1	-32.3
12.00	1.38	-0.41	-0.09	.88	.08	.23	948	776.1	358.0	-31.3
12.50	1.35	-0.39	-0.09	.87	.09	.24	947	775.9	357.0	-30.4
13.00	1.30	-0.38	-0.09	.83	.11	.27	941	775.8	355.9	-29.4
13.50	1.22	-0.37	-0.09	.77	.14	.30	929	775.7	354.8	-28.4
14.00	1.19	-0.35	-0.09	.76	.15	.31	928	775.6	353.7	-27.4
14.50	1.17	-0.34	-0.08	.75	.16	.32	926	775.5	352.6	-26.4
15.00	1.20	-0.32	-0.08	.79	.14	.29	935	775.4	351.6	-25.4
15.50	1.17	-0.31	-0.08	.79	.14	.30	936	775.4	350.5	-24.4
16.00	1.15	-0.29	-0.08	.78	.15	.32	935	775.4	349.4	-23.4
16.50	1.11	-0.27	-0.08	.75	.17	.33	930	775.3	348.3	-22.4
17.00	1.08	-0.26	-0.08	.75	.18	.33	930	775.3	347.2	-21.4
17.50	1.09	-0.25	-0.07	.77	.17	.32	935	775.4	346.1	-20.4
18.00	1.02	-0.23	-0.07	.72	.20	.36	926	775.4	345.1	-19.4
18.50	1.00	-0.22	-0.07	.71	.21	.36	924	775.4	344.0	-18.4
19.00	0.96	-0.20	-0.07	.69	.22	.38	920	775.5	342.9	-17.4
19.50	0.94	-0.19	-0.06	.69	.22	.39	922	775.6	341.8	-16.4
20.00	0.87	-0.17	-0.06	.64	.26	.42	910	775.7	340.7	-15.4
20.50	0.86	-0.16	-0.06	.64	.26	.42	911	775.8	339.6	-14.4
21.00	0.84	-0.14	-0.06	.64	.27	.42	912	775.9	338.6	-13.4
21.50	0.80	-0.13	-0.06	.61	.29	.44	906	776.1	337.5	-12.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41122.00	0.76	-0.12	-0.05	.58	-17.31	-17.46	900	776.2	336.4	-11.4
22.50	0.77	-0.11	-0.05	.61	.29	.44	909	776.4	335.3	-10.4
23.00	0.71	-0.10	-0.05	.56	.33	.48	896	776.6	334.2	-9.3
23.50	0.70	-0.09	-0.05	.56	.34	.49	897	776.8	333.1	-8.3
24.00	0.66	-0.07	-0.05	.54	.35	.51	891	777.0	332.0	-7.3
24.50	0.62	-0.04	-0.04	.53	.36	.52	890	777.2	330.9	-6.3
25.00	0.61	-0.03	-0.04	.54	.36	.51	894	777.4	329.8	-5.3
25.50	0.63	-0.02	-0.04	.57	.33	.49	904	777.7	328.7	-4.2
26.00	0.64	-0.01	-0.04	.60	.32	.47	913	777.9	327.6	-3.2
26.50	0.66	-0.01	-0.03	.62	.31	.45	920	778.2	326.5	-2.2
41127.00	0.64	0.01	-0.03	.62	-17.31	-17.46	920	778.5	325.4	-1.2
27.20	0.80	0.01	-0.03	.78	.20	.36	955	778.6	325.0	-0.8
27.40	0.96	0.02	-0.03	.95	.12	.28	985	778.7	324.5	-0.3
27.60	1.61	0.02	-0.03	1.60	-16.88	.06	1062	778.8	324.1	0.1
27.80	1.93	0.02	-0.03	1.92	.80	-16.98	1092	778.9	323.6	0.5
28.00	1.44	0.03	-0.03	1.44	.92	-17.10	1051	779.0	323.2	0.9
28.20	1.11	0.03	-0.03	1.12	-17.03	.21	1014	779.2	322.7	1.3
28.40	0.78	0.04	-0.03	.79	.19	.36	963	779.3	322.3	1.7
28.60	0.94	0.04	-0.03	.96	.11	.28	990	779.4	321.8	2.1
28.80	0.78	0.04	-0.03	.80	.19	.36	963	779.5	321.4	2.5
41129.00	0.77	0.05	-0.02	.80	-17.20	-17.36	963	779.6	320.9	3.0
29.50	0.72	0.06	-0.02	.75	.23	.38	954	779.9	319.8	4.0
30.00	0.68	0.07	-0.02	.73	.24	.39	951	780.3	318.7	5.0
30.50	0.70	0.08	-0.02	.76	.22	.38	959	780.6	317.6	6.1
31.00	0.78	0.09	-0.02	.84	.17	.34	976	780.9	316.4	7.1
31.50	1.00	0.09	-0.02	1.08	.06	.23	1015	781.2	315.3	8.1
32.00	1.21	0.10	-0.01	1.29	-16.98	.15	1044	781.6	314.1	9.2
32.50	0.97	0.10	-0.01	1.05	-17.07	.24	1014	781.9	313.0	10.2
33.00	0.94	0.10	-0.01	1.02	.08	.25	1011	782.2	311.6	11.3
33.50	0.91	0.10	-0.01	1.00	.09	.26	1010	782.6	310.7	12.3
34.00	0.88	0.10	-0.01	.96	.11	.28	1005	782.9	309.5	13.3
34.50	0.82	0.09	-0.01	.90	.14	.30	998	783.2	308.3	14.4
35.00	0.79	0.08	0.00	.86	.16	.32	991	783.6	307.2	15.4
35.50	0.81	0.07	0.00	.87	.16	.32	991	783.9	306.0	16.5
36.00	0.78	0.05	0.00	.83	.18	.34	985	784.2	304.8	17.5
36.50	0.78	0.03	0.00	.81	.20	.35	982	784.6	303.6	18.6
37.00	0.77	0.01	0.00	.79	.21	.36	979	784.9	302.4	19.6
37.50	0.72	0.00	0.00	.72	.25	.40	967	785.2	301.1	20.7
38.00	0.72	0.00	0.00	.72	.25	.40	969	785.5	299.9	21.7
38.50	0.71	0.00	0.00	.72	.25	.39	970	785.9	298.7	22.8
39.00	0.71	0.00	0.01	.72	.25	.39	970	786.2	297.4	23.9
39.50	0.66	0.00	0.01	.66	.29	.43	958	786.5	296.1	24.9
40.00	0.65	0.00	0.01	.66	.29	.42	959	786.8	294.9	26.0
40.50	0.62	0.00	0.01	.63	.31	.44	954	787.0	293.6	27.0
41.00	0.59	0.00	0.01	.60	.33	.47	948	787.3	292.3	28.1
41.50	0.59	0.00	0.01	.60	.33	.46	949	787.6	290.9	29.1
42.00	0.54	0.00	0.01	.55	.37	.49	938	787.8	289.6	30.2
42.50	0.48	0.00	0.01	.49	.42	.54	924	788.1	288.2	31.2
43.00	0.45	0.00	0.01	.46	.45	.56	916	788.3	286.6	32.3
43.50	0.45	0.00	0.01	.46	.45	.56	916	788.6	285.4	33.4
44.00	0.44	0.00	0.01	.46	.45	.56	916	788.8	284.0	34.4
44.50	0.49	0.00	0.01	.51	.40	.51	933	789.0	282.5	35.5
45.00	0.49	0.00	0.01	.50	.41	.52	930	789.2	281.0	36.5
45.50	0.49	0.00	0.01	.50	.40	.52	931	789.4	279.5	37.6
46.00	0.51	0.00	0.01	.52	.39	.50	938	789.5	277.9	38.6
46.50	0.53	0.00	0.01	.54	.37	.49	944	789.7	276.3	39.7
47.00	0.55	0.00	0.01	.56	.35	.47	951	789.8	274.6	40.7
47.50	0.57	0.00	0.01	.59	.33	.44	959	789.9	272.9	41.8

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41148.00	0.54	0.00	0.01	.56	-17.35	-17.46	953	790.0	271.1	42.8
48.50	0.56	0.00	0.01	.58	.33	.45	959	790.1	269.3	43.9
49.00	0.58	0.00	0.01	.60	.31	.43	965	790.2	267.4	44.9
49.50	0.52	0.00	0.01	.54	.35	.47	950	790.2	265.4	45.9
50.00	0.54	0.00	0.01	.56	.34	.45	957	790.3	263.4	46.9
50.50	0.59	0.00	0.01	.60	.31	.42	967	790.3	261.2	48.0
51.00	0.58	0.00	0.01	.60	.30	.42	968	790.3	258.9	49.0
51.50	0.52	0.00	0.01	.54	.35	.47	953	790.3	256.5	50.0
52.00	0.52	0.00	0.01	.53	.36	.47	951	790.3	254.0	50.9
52.50	0.61	0.00	0.01	.62	.29	.40	974	790.2	251.3	51.9
53.00	0.63	0.00	0.01	.64	.27	.39	979	790.1	248.4	52.9
53.50	0.80	0.00	0.01	.81	.16	.29	1013	790.0	245.3	53.8
54.00	1.11	0.00	0.01	1.11	.02	.15	1059	789.9	242.0	54.7
54.50	0.68	0.00	0.01	.69	.23	.36	990	789.8	238.4	55.6
55.00	0.62	0.00	0.01	.63	.27	.39	979	789.7	234.5	56.5
55.50	0.64	0.00	0.01	.64	.27	.38	980	789.5	230.2	57.3
56.00	0.65	0.00	0.01	.66	.25	.37	985	789.3	225.6	58.0
56.50	0.61	0.00	0.01	.62	.27	.40	976	789.1	220.5	58.6
57.00	0.55	0.00	0.00	.55	.33	.45	959	788.8	215.0	59.4
57.50	0.51	0.00	0.00	.51	.35	.48	948	788.6	209.0	60.0
58.00	0.50	0.00	0.00	.50	.36	.49	945	788.3	202.5	60.5
58.50	0.50	0.00	0.00	.50	.36	.49	945	788.0	195.8	60.9
59.00	0.81	0.00	0.00	.81	.14	.28	1015	787.7	188.7	61.2
59.50	0.71	0.00	0.00	.71	.20	.34	997	787.4	181.4	61.4
60.00	0.61	0.00	0.00	.61	.27	.41	973	787.0	174.1	61.4
60.50	0.54	0.00	0.00	.53	.33	.47	952	786.7	167.0	61.4
61.00	0.54	0.00	0.00	.54	.32	.46	954	786.3	160.1	61.2
61.50	0.60	0.00	0.00	.60	.28	.41	969	785.9	153.6	61.0
62.00	0.72	0.00	0.00	.72	.19	.34	995	785.4	147.5	60.7
62.50	0.81	0.00	0.00	.81	.14	.28	1012	785.0	141.9	60.2
63.00	0.85	0.00	0.00	.85	.12	.26	1018	784.5	136.7	59.8
63.50	0.79	0.00	0.00	.79	.15	.30	1007	784.0	132.0	59.2
64.00	0.73	0.00	-0.01	.73	.18	.33	995	783.5	127.6	58.6
64.50	0.68	0.00	-0.01	.67	.22	.37	982	783.0	123.6	58.0
65.00	0.70	0.00	-0.01	.69	.20	.36	986	782.4	119.9	57.4
65.50	0.90	0.00	-0.01	.89	.08	.25	1023	781.9	116.6	56.7
66.00	0.67	0.00	-0.01	.66	.22	.38	978	781.3	113.4	56.0
66.50	0.64	0.00	-0.01	.63	.24	.40	970	780.7	110.5	55.2
67.00	0.54	0.00	-0.01	.53	.32	.47	944	780.1	107.8	54.5
67.50	0.62	0.00	-0.01	.61	.25	.41	964	779.5	105.2	53.7
68.00	0.81	0.00	-0.01	.80	.13	.30	1002	778.8	102.8	53.0
68.50	0.76	0.00	-0.01	.75	.15	.33	992	778.2	100.5	52.2
69.00	0.64	0.00	-0.01	.63	.23	.40	966	777.5	98.3	51.4
69.50	0.52	0.00	-0.01	.50	.34	.50	931	776.8	96.3	50.6
70.00	0.55	0.00	-0.01	.54	.30	.47	941	776.1	94.3	49.8
70.50	0.61	0.00	-0.01	.60	.25	.43	956	775.4	92.4	49.0
71.00	0.65	0.00	-0.02	.64	.21	.40	965	774.7	90.6	48.1
71.50	0.66	0.00	-0.02	.65	.20	.40	967	774.0	88.9	47.3
72.00	0.75	0.00	-0.02	.74	.14	.34	984	773.3	87.2	46.5
72.50	0.79	0.00	-0.02	.78	.12	.32	991	772.5	85.5	45.7
73.00	0.83	0.00	-0.02	.82	.09	.30	999	771.8	83.9	44.8
73.50	0.77	0.00	-0.02	.75	.12	.34	986	771.0	82.4	44.0
74.00	0.71	0.00	-0.02	.69	.15	.37	974	770.3	80.9	43.1
74.50	0.70	0.00	-0.02	.68	.15	.38	972	769.5	79.4	42.3
75.00	0.69	0.00	-0.02	.67	.16	.39	967	768.7	77.9	41.5
75.50	0.71	0.00	-0.02	.69	.15	.38	969	768.0	76.5	40.6
76.00	0.65	0.00	-0.02	.63	.19	.42	954	767.2	75.2	39.8
76.50	0.64	0.00	-0.02	.62	.20	.43	949	766.4	73.8	38.9
77.00	0.66	0.00	-0.02	.64	.18	.41	953	765.7	72.5	38.1
77.50	0.65	0.00	-0.02	.63	.19	.42	949	764.9	71.1	37.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41178.00	0.65	0.00	-0.02	.62	-17.19	-17.42	945	764.1	69.9	36.4
78.50	0.69	0.00	-0.02	.67	.15	.39	956	763.4	68.6	35.5
79.00	0.64	0.00	-0.02	.61	.19	.44	943	762.6	67.3	34.7
79.50	0.66	0.00	-0.02	.63	.17	.42	947	761.8	66.1	33.8
80.00	0.62	0.00	-0.02	.60	.19	.44	937	761.1	64.9	33.0
80.50	0.67	0.00	-0.02	.65	.15	.41	947	760.4	63.6	32.1
81.00	1.00	0.00	-0.02	.98	-16.96	.23	1009	759.6	62.4	31.3
81.50	1.05	0.00	-0.02	1.02	.93	.21	1016	758.9	61.3	30.4
82.00	0.84	0.00	-0.02	.81	-17.03	.31	981	758.2	60.1	29.6
82.50	0.83	0.00	-0.02	.81	.03	.31	979	757.5	58.9	28.7
83.00	0.77	0.00	-0.02	.75	.07	.35	967	756.8	57.8	27.9
83.50	0.76	-0.01	-0.02	.74	.06	.35	966	756.1	56.6	27.0
84.00	0.78	-0.05	-0.02	.71	.07	.37	963	755.4	55.5	26.2
84.50	1.19	-0.10	-0.02	1.07	-16.87	.18	1024	754.8	54.4	25.3
85.00	1.55	-0.13	-0.02	1.40	.74	.06	1065	754.1	53.2	24.5
85.50	1.64	-0.15	-0.02	1.47	.72	.04	1072	753.5	52.1	23.6
86.00	1.63	-0.17	-0.02	1.44	.72	.04	1070	752.9	51.0	22.8
86.50	1.50	-0.19	-0.02	1.29	.76	.09	1053	752.3	49.9	21.9
87.00	1.41	-0.20	-0.02	1.19	.80	.13	1038	751.8	48.8	21.1
87.50	1.42	-0.21	-0.01	1.20	.80	.12	1038	751.2	47.7	20.3
88.00	1.41	-0.21	-0.01	1.19	.79	.13	1036	750.7	46.7	19.4
88.50	1.43	-0.21	-0.01	1.20	.79	.12	1037	750.2	45.6	18.6
89.00	1.39	-0.22	-0.01	1.16	.80	.13	1031	749.7	44.5	17.7
89.50	1.40	-0.22	-0.01	1.17	.79	.13	1031	749.2	43.4	16.9
90.00	1.44	-0.21	-0.01	1.22	.78	.12	1034	748.8	42.4	16.0
90.50	1.42	-0.21	-0.01	1.20	.79	.13	1028	748.3	41.3	15.2
91.00	1.41	-0.20	-0.01	1.20	.79	.13	1026	747.9	40.3	14.3
91.50	1.41	-0.20	0.00	1.21	.79	.13	1027	747.6	39.2	13.5
92.00	1.37	-0.19	0.00	1.17	.80	.14	1021	747.2	38.2	12.7
92.50	1.32	-0.19	0.00	1.13	.81	.16	1014	746.9	37.1	11.8
93.00	1.38	-0.18	0.00	1.20	.79	.13	1019	746.6	36.1	11.0
93.50	1.41	-0.17	0.00	1.24	.78	.12	1021	746.3	35.0	10.1
94.00	1.44	-0.17	0.00	1.27	.77	.11	1024	746.1	34.0	9.3
94.50	1.57	-0.16	0.01	1.42	.71	.06	1042	745.9	33.0	8.4
95.00	1.67	-0.15	0.01	1.53	.68	.03	1051	745.7	31.9	7.6
95.50	1.20	-0.13	0.01	1.08	.84	.18	996	745.5	30.9	6.8
96.00	1.04	-0.12	0.01	.93	.92	.24	968	745.4	29.9	5.9
96.50	0.91	-0.11	0.01	.81	.99	.30	943	745.3	28.8	5.1
97.00	0.95	-0.10	0.01	.86	.96	.27	950	745.2	27.8	4.2
97.50	0.95	-0.09	0.01	.87	.95	.27	952	745.2	26.8	3.4
98.00	0.96	-0.08	0.02	.90	.94	.25	955	745.1	25.8	2.6
98.50	0.92	-0.07	0.02	.87	.96	.26	949	745.1	24.8	1.7
99.00	1.09	-0.06	0.02	1.05	.86	.19	979	745.2	23.7	0.9
99.50	1.08	-0.04	0.02	1.05	.85	.19	981	745.3	22.7	0.0
41200.00	1.09	-0.03	0.02	1.08	.85	.18	982	745.4	21.7	-0.8
00.50	1.17	-0.02	0.02	1.17	.81	.14	993	745.5	20.7	-1.6
01.00	1.41	0.00	0.02	1.43	.72	.05	1024	745.6	19.7	-2.5
01.50	1.38	0.01	0.03	1.42	.72	.05	1022	745.8	18.7	-3.3
02.00	1.28	0.02	0.03	1.33	.75	.08	1013	746.1	17.7	-4.1
02.50	1.07	0.03	0.03	1.13	.82	.15	988	746.3	16.6	-5.0
03.00	1.02	0.05	0.03	1.09	.84	.17	979	746.6	15.6	-5.8
03.50	0.96	0.06	0.03	1.05	.86	.18	972	746.9	14.6	-6.6
04.00	0.87	0.07	0.03	.98	.89	.21	960	747.2	13.6	-7.5
04.50	0.86	0.09	0.04	.98	.90	.21	957	747.6	12.6	-8.3
05.00	0.87	0.10	0.04	1.01	.89	.19	959	748.0	11.6	-9.2
05.50	0.83	0.12	0.04	.99	.90	.20	954	748.4	10.6	-10.0
06.00	0.81	0.13	0.04	.98	.91	.20	951	748.8	9.6	-10.8
06.50	0.82	0.14	0.04	1.00	.90	.19	953	749.3	8.5	-11.7
07.00	0.94	0.16	0.04	1.14	.85	.14	973	749.8	7.5	-12.5
07.50	1.21	0.17	0.05	1.42	.75	.04	1006	750.4	6.5	-13.3

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41208.00	0.99	0.18	0.05	1.22	-16.82	-17.11	982	750.9	5.5	-14.2
08.50	0.89	0.20	0.05	1.14	.85	.13	971	751.5	4.5	-15.0
09.00	0.83	0.21	0.05	1.09	.87	.15	964	752.1	3.5	-15.8
09.50	0.86	0.22	0.05	1.14	.85	.13	972	752.7	2.4	-16.7
10.00	0.87	0.24	0.06	1.16	.84	.13	975	753.4	1.4	-17.5
10.50	0.85	0.25	0.06	1.16	.84	.12	974	754.1	0.4	-18.3
11.00	0.91	0.26	0.06	1.24	.81	.09	984	754.8	359.4	-19.2
11.50	0.95	0.28	0.06	1.29	.80	.08	988	755.5	358.3	-20.0
12.00	1.24	0.29	0.06	1.60	.70	-16.98	1023	756.3	357.3	-20.8
12.50	1.53	0.30	0.07	1.90	.62	.90	1052	757.0	356.3	-21.7
13.00	1.33	0.32	0.07	1.72	.67	.95	1033	757.8	355.2	-22.5
13.50	1.18	0.33	0.07	1.58	.72	.98	1016	758.6	354.2	-23.3
14.00	1.09	0.34	0.07	1.50	.75	-17.01	1008	759.5	353.2	-24.2
14.50	1.04	0.35	0.07	1.46	.76	.02	1004	760.3	352.1	-25.0
15.00	0.97	0.36	0.07	1.41	.78	.03	997	761.2	351.1	-25.8
15.50	0.90	0.38	0.07	1.35	.81	.04	987	762.1	350.0	-26.7
16.00	0.85	0.39	0.08	1.31	.83	.05	981	763.0	349.0	-27.5
16.50	0.78	0.40	0.08	1.25	.85	.07	973	763.9	347.9	-28.3
17.00	0.75	0.41	0.08	1.24	.86	.07	970	764.8	346.8	-29.2
17.50	0.73	0.42	0.08	1.23	.87	.07	969	765.8	345.8	-30.0
18.00	0.71	0.43	0.08	1.22	.88	.07	967	766.7	344.7	-30.8
18.50	0.66	0.44	0.08	1.19	.89	.08	962	767.7	343.6	-31.7
19.00	0.85	0.45	0.08	1.38	.82	.03	987	768.7	342.5	-32.5
19.50	1.06	0.46	0.08	1.61	.75	-16.96	1014	769.7	341.5	-33.3
20.00	1.07	0.47	0.08	1.63	.75	.95	1013	770.6	340.4	-34.2
20.50	1.18	0.48	0.09	1.75	.73	.92	1022	771.7	339.3	-35.0
21.00	1.21	0.49	0.09	1.79	.71	.91	1028	772.7	338.2	-35.8
21.50	1.13	0.50	0.09	1.72	.72	.92	1026	773.7	337.0	-36.7
22.00	0.54	0.51	0.09	1.14	.91	-17.10	959	774.7	335.9	-37.5
22.50	0.26	0.52	0.09	.87	-17.04	.22	914	775.7	334.8	-38.3
23.00	0.29	0.53	0.09	.91	.02	.19	920	776.7	333.6	-39.2
23.50	0.35	0.53	0.09	.98	.00	.16	931	777.8	332.5	-40.0
24.00	0.41	0.54	0.09	1.04	-16.97	.13	941	778.8	331.3	-40.8
24.50	0.41	0.55	0.09	1.05	.97	.13	944	779.8	330.2	-41.7
25.00	0.52	0.55	0.09	1.17	.92	.08	964	780.9	329.0	-42.5
25.50	0.50	0.56	0.09	1.15	.93	.08	961	781.9	327.8	-43.3
26.00	0.49	0.56	0.09	1.14	.94	.09	959	782.9	326.6	-44.1
26.50	0.44	0.57	0.09	1.10	.95	.10	953	783.9	325.3	-45.0
27.00	0.42	0.57	0.09	1.09	.96	.10	952	784.9	324.1	-45.8
27.50	0.46	0.58	0.09	1.13	.95	.08	958	785.9	322.8	-46.6
28.00	0.23	0.58	0.09	.91	-17.05	.17	922	786.9	321.5	-47.5
28.50	0.16	0.58	0.09	.84	.08	.20	908	787.9	320.2	-48.3
29.00	0.22	0.59	0.09	.91	.05	.17	922	788.9	318.9	-49.1
29.50	0.31	0.59	0.09	.99	.01	.13	936	789.9	317.6	-49.9
30.00	0.35	0.59	0.09	1.03	.00	.11	943	790.8	316.2	-50.7
30.50	0.23	0.59	0.09	.91	.05	.16	923	791.8	314.8	-51.6
31.00	0.19	0.59	0.09	.87	.08	.18	915	792.7	313.4	-52.4
31.50	0.18	0.59	0.09	.86	.08	.17	915	793.6	311.9	-53.2
32.00	0.27	0.59	0.09	.95	.04	.13	931	794.5	310.4	-54.0
32.50	0.28	0.58	0.09	.96	.03	.13	934	795.4	308.9	-54.8
33.00	0.24	0.58	0.09	.92	.06	.14	927	796.2	307.3	-55.6
33.50	0.23	0.58	0.09	.90	.06	.15	924	797.1	305.7	-56.4
34.00	0.09	0.58	0.09	.76	.14	.22	895	797.9	304.0	-57.2
34.50	0.09	0.57	0.09	.74	.15	.23	891	798.7	302.2	-58.0
35.00	0.13	0.57	0.09	.78	.13	.20	903	799.5	300.4	-58.8
35.50	0.17	0.56	0.09	.82	.11	.18	912	800.3	298.5	-59.6
36.00	0.17	0.55	0.08	.80	.12	.18	908	801.0	296.5	-60.4
36.50	0.19	0.54	0.08	.81	.12	.17	913	801.7	294.5	-61.1
37.00	0.21	0.53	0.08	.83	.11	.16	917	802.4	292.3	-61.9
37.50	0.21	0.52	0.08	.81	.12	.18	912	803.1	290.0	-62.6

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41238.00	0.20	0.51	0.08	.80	-17.12	-17.18	911	803.8	287.5	-63.4
38.50	0.15	0.49	0.08	.73	.16	.21	896	804.4	284.9	-64.1
39.00	0.15	0.48	0.08	.71	.18	.22	892	805.0	282.2	-64.8
39.50	0.12	0.46	0.08	.67	.20	.25	882	805.6	279.2	-65.5
40.00	0.13	0.44	0.08	.64	.22	.26	876	806.1	276.0	-66.2
40.50	0.10	0.42	0.08	.60	.25	.29	865	806.6	272.5	-66.8
41.00	0.06	0.39	0.08	.53	.30	.34	842	807.1	268.7	-67.4
41.50	0.06	0.36	0.07	.50	.33	.36	831	807.6	264.5	-68.0
42.00	0.07	0.33	0.07	.47	.35	.39	817	808.0	260.0	-68.5
42.50	0.10	0.29	0.07	.46	.36	.40	814	808.4	255.1	-69.0
43.00	0.11	0.24	0.07	.42	.40	.43	794	808.8	249.7	-69.4
43.50	0.17	0.18	0.07	.42	.40	.43	795	809.1	243.8	-69.7
44.00	0.29	0.11	0.07	.47	.35	.38	821	809.5	237.4	-70.0
44.50	0.38	0.02	0.06	.46	.36	.40	815	809.8	230.6	-70.1
45.00	0.47	0.00	0.06	.53	.30	.34	844	810.0	223.4	-70.2
45.50	0.54	0.00	0.06	.60	.25	.28	870	810.2	216.1	-70.1
46.00	0.58	0.00	0.06	.64	.22	.25	882	810.4	208.6	-69.9
46.50	0.60	0.00	0.06	.66	.20	.24	888	810.6	201.3	-69.6
47.00	0.54	0.00	0.05	.60	.25	.28	871	810.7	194.2	-69.2
47.50	0.56	0.00	0.05	.62	.23	.27	878	810.8	187.5	-68.6
48.00	0.61	0.00	0.05	.66	.20	.24	890	810.9	181.2	-68.0
48.50	0.64	0.00	0.05	.69	.18	.22	900	810.9	175.4	-67.3
49.00	0.74	0.00	0.05	.79	.12	.16	923	810.9	170.1	-66.5
49.50	0.61	0.00	0.04	.66	.20	.24	892	810.9	165.2	-65.7
50.00	0.59	0.00	0.04	.64	.22	.25	886	810.9	160.7	-64.8
50.50	0.23	0.00	0.04	.28	.58	.61	698	810.8	156.6	-63.9
51.00	0.40	0.00	0.04	.44	.38	.41	813	810.7	152.9	-62.9
51.50	0.48	0.00	0.04	.52	.31	.34	847	810.6	149.5	-61.9
52.00	0.55	0.00	0.03	.58	.26	.30	868	810.4	146.3	-60.8
52.50	0.79	0.00	0.03	.83	.11	.14	931	810.2	143.3	-59.8
53.00	0.91	0.00	0.03	.94	.04	.09	953	810.0	140.6	-58.7
53.50	1.24	0.00	0.03	1.27	-16.91	-16.96	999	809.7	138.0	-57.6
54.00	0.87	0.00	0.03	.89	-17.07	-17.11	943	809.4	135.5	-56.5
54.50	0.86	0.00	0.02	.89	.07	.12	942	809.1	133.2	-55.4
55.00	0.57	0.00	0.02	.59	.26	.30	869	808.8	131.1	-54.3
55.50	0.65	0.00	0.02	.67	.20	.24	893	808.5	129.0	-53.2
56.00	0.70	0.00	0.02	.72	.17	.21	905	808.1	127.0	-52.0
56.50	0.73	0.00	0.02	.75	.15	.20	912	807.7	125.1	-50.9
57.00	0.73	0.00	0.02	.75	.15	.20	912	807.2	123.3	-49.7
57.50	0.72	0.00	0.02	.74	.16	.21	910	806.8	121.5	-48.6
58.00	0.71	0.00	0.02	.72	.17	.22	905	806.3	119.8	-47.4
58.50	0.75	0.00	0.01	.76	.15	.20	914	805.8	118.1	-46.3
59.00	0.81	0.00	0.01	.83	.11	.16	928	805.3	116.5	-45.1
59.50	0.90	0.00	0.01	.92	.06	.12	945	804.8	114.9	-43.9
60.00	0.91	0.00	0.01	.93	.06	.12	946	804.2	113.4	-42.8
60.50	0.90	0.00	0.01	.91	.06	.13	942	803.7	111.9	-41.6
61.00	0.96	0.00	0.01	.97	.04	.10	952	803.1	110.4	-40.4
61.50	1.02	0.00	0.01	1.03	.01	.08	961	802.5	109.0	-39.3
62.00	1.00	0.00	0.01	1.01	.02	.09	958	801.9	107.6	-38.1
62.50	0.95	0.00	0.01	.97	.03	.11	952	801.2	106.2	-36.9
63.00	0.99	0.00	0.01	1.00	.02	.10	956	800.6	104.9	-35.7
63.50	0.96	0.00	0.01	.98	.03	.11	952	799.9	103.5	-34.6
64.00	0.99	0.00	0.01	1.01	.01	.10	957	799.3	102.2	-33.4
64.50	1.00	0.00	0.01	1.01	.02	.10	956	798.6	100.9	-32.2
65.00	1.02	0.00	0.01	1.04	.00	.09	960	797.9	99.6	-31.1
65.50	1.05	0.00	0.01	1.06	-16.99	.08	962	797.2	98.3	-29.9
66.00	1.13	0.00	0.01	1.14	.96	.05	974	796.5	97.1	-28.7
66.50	1.21	0.00	0.01	1.22	.92	.02	986	795.8	95.8	-27.5
67.00	1.31	0.00	0.01	1.32	.88	-16.99	998	795.1	94.6	-26.4
67.50	1.41	0.00	0.01	1.42	.85	.96	1008	794.4	93.4	-25.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41268.00	1.38	0.00	0.01	1.40	-16.86	-16.97	1005	793.6	92.1	-24.0
68.50	1.25	0.00	0.01	1.26	.91	-17.02	988	792.9	90.9	-22.9
69.00	1.17	0.00	0.01	1.18	.94	.05	978	792.2	89.7	-21.7
69.50	1.09	0.00	0.01	1.10	.97	.08	967	791.5	88.6	-20.5
70.00	1.08	0.00	0.01	1.09	.97	.08	966	790.8	87.4	-19.4
70.50	1.10	0.00	0.01	1.11	.96	.08	968	790.0	86.2	-18.2
71.00	1.12	0.00	0.01	1.13	.95	.07	971	789.3	85.0	-17.0
71.50	1.08	0.00	0.01	1.10	.96	.08	967	788.6	83.9	-15.9
72.00	1.07	0.00	0.01	1.09	.96	.09	965	787.9	82.7	-14.7
72.50	0.99	0.00	0.01	1.00	.99	.12	952	787.2	81.5	-13.6
73.00	0.95	0.00	0.01	.96	-17.00	.14	948	786.5	80.4	-12.4
73.50	1.07	0.00	0.01	1.08	-16.94	.09	968	785.8	79.3	-11.2
74.00	1.21	0.00	0.02	1.23	.89	.03	986	785.2	78.1	-10.1
74.50	1.30	0.00	0.02	1.32	.85	.00	997	784.5	77.0	-8.9
75.00	1.31	0.00	0.02	1.33	.84	.00	999	783.9	75.8	-7.8
75.50	1.35	0.00	0.02	1.37	.83	-16.99	1004	783.2	74.7	-6.6
76.00	1.41	0.00	0.02	1.43	.80	.97	1012	782.6	73.6	-5.5
76.50	1.42	0.00	0.02	1.44	.79	.96	1015	782.0	72.5	-4.3
77.00	1.46	0.00	0.02	1.48	.77	.94	1023	781.4	71.3	-3.2
77.50	1.96	0.00	0.02	1.98	.63	.81	1068	780.8	70.2	-2.1
78.00	2.23	0.00	0.02	2.25	.56	.75	1090	780.2	69.1	-0.9
78.50	2.23	0.00	0.02	2.26	.56	.75	1093	779.7	68.0	0.2
79.00	1.98	0.00	0.02	2.01	.60	.80	1076	779.1	66.9	1.4
79.50	2.04	0.00	0.02	2.07	.59	.78	1080	778.6	65.8	2.5
80.00	2.10	0.00	0.02	2.12	.58	.77	1084	778.1	64.7	3.6
80.50	2.08	0.00	0.03	2.10	.58	.78	1084	777.6	63.6	4.8
81.00	2.00	0.00	0.03	2.03	.59	.79	1078	777.2	62.5	5.9
81.50	1.85	0.00	0.03	1.88	.63	.83	1065	776.7	61.3	7.0
82.00	1.72	0.00	0.03	1.75	.67	.87	1052	776.3	60.2	8.1
82.50	1.70	0.00	0.03	1.73	.67	.88	1049	775.9	59.1	9.3
83.00	1.68	0.00	0.03	1.71	.67	.88	1049	775.5	58.0	10.4
83.50	1.62	0.00	0.03	1.65	.69	.89	1044	775.2	56.9	11.5
84.00	1.57	0.00	0.03	1.60	.70	.91	1039	774.8	55.8	12.6
84.50	1.60	0.00	0.03	1.63	.70	.90	1040	774.5	54.7	13.8
85.00	1.60	0.00	0.03	1.63	.70	.91	1039	774.3	53.6	14.9
85.50	1.65	0.00	0.03	1.68	.69	.89	1042	774.0	52.5	16.0
86.00	1.65	0.00	0.03	1.68	.69	.90	1041	773.8	51.4	17.1
86.50	1.62	0.00	0.03	1.65	.70	.90	1039	773.6	50.3	18.2
87.00	1.64	0.00	0.04	1.68	.69	.90	1041	773.4	49.2	19.3
87.50	1.64	0.05	0.04	1.72	.68	.88	1045	773.2	48.1	20.4
88.00	1.60	0.09	0.04	1.73	.68	.88	1046	773.1	47.0	21.5
88.50	1.60	0.12	0.04	1.76	.66	.87	1050	773.0	45.9	22.6
89.00	1.54	0.15	0.04	1.73	.67	.88	1048	772.9	44.8	23.7
89.50	1.51	0.18	0.04	1.73	.68	.88	1046	772.9	43.7	24.8
90.00	1.45	0.20	0.04	1.69	.69	.89	1041	772.8	42.6	25.9
90.50	1.42	0.22	0.04	1.68	.69	.89	1040	772.9	41.5	27.0
91.00	1.25	0.24	0.04	1.54	.73	.93	1025	772.9	40.4	28.1
91.50	1.01	0.26	0.05	1.32	.80	-17.00	1000	773.0	39.3	29.2
92.00	0.95	0.28	0.05	1.28	.82	.01	995	773.1	38.1	30.3
92.50	1.05	0.30	0.05	1.39	.78	-16.97	1007	773.2	37.0	31.4
93.00	1.14	0.32	0.05	1.51	.75	.94	1021	773.3	35.9	32.4
93.50	1.13	0.34	0.05	1.52	.74	.93	1022	773.5	34.8	33.5
94.00	1.17	0.35	0.05	1.58	.73	.92	1029	773.7	33.7	34.6
94.50	1.23	0.37	0.06	1.66	.70	.89	1038	773.9	32.6	35.7
95.00	1.40	0.39	0.06	1.85	.65	.85	1056	774.2	31.5	36.8
95.50	1.39	0.40	0.06	1.85	.66	.84	1056	774.5	30.3	37.8
96.00	1.40	0.42	0.06	1.88	.65	.84	1057	774.8	29.2	38.9
96.50	1.44	0.43	0.06	1.94	.64	.82	1063	775.2	28.1	40.0
97.00	1.43	0.45	0.06	1.94	.64	.82	1065	775.5	26.9	41.0
97.50	1.44	0.47	0.06	1.97	.63	.81	1067	775.9	25.8	42.1

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41298.00	1.68	0.48	0.07	2.23	-16.58	-16.76	1069	776.4	24.7	43.2
98.50	1.46	0.50	0.07	2.02	.62	.80	1075	776.8	23.5	44.2
99.00	1.16	0.51	0.07	1.74	.69	.86	1048	777.3	22.4	45.3
99.50	1.12	0.53	0.07	1.71	.70	.87	1042	777.8	21.3	46.3
41300.00	1.02	0.54	0.07	1.63	.73	.89	1032	778.3	20.1	47.4
00.50	0.95	0.55	0.07	1.58	.75	.90	1027	778.9	19.0	48.4
01.00	0.91	0.56	0.07	1.55	.76	.90	1023	779.4	17.8	49.5
01.50	1.07	0.58	0.07	1.73	.71	.85	1042	780.0	16.6	50.5
02.00	1.55	0.59	0.07	2.21	.60	.75	1087	780.7	15.5	51.6
02.50	2.61	0.60	0.08	3.29	.42	.57	1162	781.3	14.3	52.6
03.00	2.70	0.61	0.08	3.39	.40	.56	1169	782.0	13.1	53.7
03.50	2.44	0.63	0.08	3.15	.44	.59	1156	782.6	12.0	54.7
04.00	1.67	0.64	0.08	2.39	.57	.71	1104	783.3	10.8	55.7
04.50	1.11	0.65	0.08	1.84	.68	.82	1057	784.1	9.6	56.8
05.00	1.04	0.66	0.08	1.78	.70	.83	1050	784.8	8.4	57.8
05.50	0.86	0.67	0.08	1.61	.75	.87	1030	785.6	7.2	58.8
06.00	0.79	0.68	0.08	1.55	.77	.89	1023	786.3	6.0	59.9
06.50	0.71	0.69	0.08	1.48	.79	.91	1015	787.1	4.8	60.9
07.00	1.08	0.70	0.08	1.86	.69	.81	1059	787.9	3.6	61.9
07.50	1.13	0.70	0.08	1.92	.67	.79	1066	788.7	2.3	62.9
08.00	0.98	0.71	0.09	1.78	.71	.82	1052	789.5	1.1	63.9
08.50	0.93	0.72	0.09	1.74	.72	.83	1047	790.4	359.9	65.0
09.00	0.83	0.73	0.09	1.64	.75	.85	1035	791.2	358.6	66.0
09.50	0.68	0.73	0.09	1.50	.79	.89	1018	792.1	357.3	67.0
10.00	0.57	0.74	0.09	1.40	.82	.91	1004	792.9	356.1	68.0
10.50	0.55	0.75	0.09	1.38	.83	.91	1001	793.8	354.8	69.0
11.00	0.52	0.75	0.09	1.37	.83	.92	1000	794.7	353.5	70.0
11.50	0.48	0.75	0.09	1.32	.85	.87	992	795.5	352.2	71.0
12.00	0.47	0.76	0.09	1.32	.85	.86	993	796.4	350.8	72.0
12.50	0.41	0.76	0.09	1.27	.87	.88	986	797.3	349.5	73.0
13.00	0.36	0.77	0.09	1.22	.88	.89	980	798.2	348.1	74.0
13.50	0.35	0.77	0.09	1.22	.88	.88	982	799.1	346.7	75.0
14.00	0.35	0.78	0.09	1.22	.88	.88	980	800.0	345.3	76.0
14.50	0.40	0.78	0.09	1.27	.87	.87	987	800.9	343.9	77.0
15.00	0.56	0.78	0.09	1.43	.82	.81	1012	801.8	342.5	77.9
15.50	0.77	0.78	0.09	1.65	.76	.75	1042	802.6	341.0	78.9
16.00	0.44	0.78	0.09	1.32	.85	.84	997	803.5	339.5	79.9
16.50	0.32	0.78	0.09	1.19	.89	.88	978	804.4	338.0	80.6
17.00	0.17	0.78	0.09	1.05	.95	.93	951	805.3	336.4	81.8
17.50	0.13	0.78	0.09	1.00	.97	.95	941	806.2	334.8	82.8
41318.00	0.09	0.78	0.09	.96	-16.98	-16.97	931	807.0	333.2	83.7
19.00	0.09	0.78	0.09	.96	.98	.96	933	808.7	329.8	85.6
20.00	0.08	0.78	0.09	.95	.99	.96	932	810.4	326.2	87.5
21.00	0.07	0.77	0.08	.93	.99	.96	929	812.1	322.3	89.3
22.00	0.08	0.76	0.08	.93	.99	.96	933	813.7	318.1	91.1
23.00	0.07	0.75	0.08	.91	-17.00	.96	931	815.2	313.4	92.8
24.00	0.07	0.74	0.08	.89	.01	.97	926	816.7	308.3	94.5
25.00	0.08	0.73	0.08	.89	.01	.97	927	818.2	302.4	96.2
26.00	0.09	0.71	0.07	.88	.02	.97	926	819.6	295.6	97.7
27.00	0.09	0.70	0.07	.86	.03	.98	920	820.9	287.5	99.1
28.00	0.08	0.68	0.07	.83	.05	.99	912	822.2	278.0	100.3
29.00	0.09	0.66	0.06	.81	.06	-17.00	910	823.4	266.7	101.2
30.00	0.11	0.64	0.06	.80	.06	.01	910	824.5	253.5	101.8
41330.50	0.08	0.62	0.06	.76	-17.08	-17.03	898	825.0	246.4	102.0
31.00	0.11	0.61	0.06	.78	.07	.02	905	825.5	239.0	102.0
31.50	0.12	0.60	0.05	.78	.08	.02	902	825.9	231.6	101.9
32.00	0.21	0.59	0.05	.85	.05	-16.98	922	826.4	224.2	101.7
32.50	0.37	0.58	0.05	1.00	-16.98	.91	961	826.8	217.0	101.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41333.00	0.41	0.56	0.05	1.02	-16.98	-16.90	966	827.2	210.2	100.9
33.50	0.35	0.55	0.05	.94	-17.01	.94	948	827.6	203.9	100.4
34.00	0.15	0.53	0.04	.73	.12	-17.05	886	828.0	198.0	99.8
34.50	0.14	0.52	0.04	.70	.14	.07	875	828.3	192.6	99.1
35.00	0.12	0.50	0.04	.67	.16	.09	867	828.6	187.6	98.3
35.50	0.16	0.48	0.04	.69	.14	.07	877	828.9	183.0	97.5
36.00	0.20	0.47	0.04	.71	.13	.06	887	829.1	178.9	96.7
36.50	0.24	0.45	0.03	.73	.12	.05	895	829.3	175.0	95.8
37.00	0.28	0.44	0.03	.75	.11	.04	903	829.5	171.5	94.9
37.50	0.32	0.42	0.03	.77	.10	.03	907	829.6	168.2	93.9
38.00	0.36	0.40	0.03	.79	.10	.02	913	829.8	165.2	92.9
38.50	0.46	0.38	0.03	.87	.06	-16.98	938	829.9	162.4	91.9
39.00	0.55	0.37	0.02	.94	.03	.94	955	829.9	159.7	90.9
39.50	0.51	0.35	0.02	.88	.06	.97	939	830.0	157.2	89.6
40.00	0.53	0.33	0.02	.88	.06	.97	942	830.0	154.9	88.8
40.50	0.49	0.31	0.02	.82	.09	-17.01	928	829.9	152.6	87.7
41.00	0.48	0.30	0.02	.79	.10	.02	920	829.9	150.5	86.6
41.50	0.47	0.28	0.01	.76	.13	.04	909	829.8	148.4	85.6
42.00	0.46	0.26	0.01	.73	.15	.06	899	829.7	146.5	84.5
42.50	0.58	0.24	0.01	.83	.09	.01	931	829.5	144.6	83.3
43.00	0.65	0.23	0.01	.88	.07	-16.98	947	829.3	142.8	82.2
43.50	0.56	0.21	0.01	.77	.12	-17.04	917	829.1	141.1	81.1
44.00	0.49	0.19	0.00	.69	.17	.09	891	828.9	139.4	80.0
44.50	0.61	0.17	0.00	.78	.12	.04	923	828.6	137.7	78.9
45.00	0.73	0.15	0.00	.87	.07	-16.99	948	828.3	136.1	77.7
45.50	0.69	0.13	0.00	.82	.10	-17.02	935	827.9	134.6	76.6
46.00	0.60	0.11	-0.01	.71	.16	.09	903	827.6	133.0	75.4
46.50	0.57	0.09	-0.01	.65	.20	.13	884	827.2	131.6	74.3
47.00	0.53	0.08	-0.01	.59	.24	.17	864	826.8	130.1	73.1
47.50	0.49	0.06	-0.01	.54	.28	.21	843	826.3	128.7	72.0
48.00	0.56	0.04	-0.01	.58	.25	.18	864	825.8	127.3	70.8
48.50	0.54	0.03	-0.02	.55	.27	.20	849	825.3	125.9	69.6
49.00	0.58	0.01	-0.02	.58	.25	.18	862	824.8	124.5	68.5
49.50	0.64	0.00	-0.02	.62	.22	.16	878	824.2	123.2	67.3
50.00	0.66	-0.02	-0.02	.62	.22	.16	880	823.7	121.9	66.1
50.50	0.64	-0.03	-0.02	.59	.24	.18	870	823.1	120.6	64.9
51.00	0.65	-0.04	-0.02	.58	.25	.19	867	822.5	119.3	63.6
51.50	0.66	-0.05	-0.03	.58	.25	.19	868	821.8	118.0	62.6
52.00	0.64	-0.06	-0.03	.55	.27	.22	858	821.2	116.8	61.4
52.50	0.63	-0.07	-0.03	.53	.29	.23	852	820.5	115.6	60.2
53.00	0.61	-0.07	-0.03	.50	.31	.26	837	819.8	114.3	59.0
53.50	0.62	-0.07	-0.03	.51	.31	.25	844	819.1	113.1	57.8
54.00	0.68	-0.07	-0.03	.57	.26	.21	871	818.4	111.9	56.6
54.50	0.66	-0.06	-0.04	.56	.26	.21	868	817.6	110.7	55.4
55.00	0.66	-0.05	-0.04	.57	.26	.21	871	816.9	109.5	54.2
55.50	0.61	-0.04	-0.04	.54	.28	.23	859	816.1	108.4	53.1
56.00	0.64	-0.02	-0.04	.58	.25	.20	880	815.4	107.2	51.9
56.50	0.65	0.00	-0.04	.60	.23	.19	890	814.6	106.0	50.7
57.00	0.65	0.00	-0.04	.61	.22	.18	892	813.8	104.9	49.5
57.50	0.62	0.00	-0.04	.58	.25	.21	879	813.0	103.8	48.2
58.00	0.65	0.00	-0.05	.60	.23	.19	887	812.2	102.6	47.0
58.50	0.68	0.00	-0.05	.63	.21	.17	899	811.4	101.5	45.8
59.00	0.73	0.00	-0.05	.68	.17	.14	916	810.6	100.4	44.6
59.50	0.78	0.00	-0.05	.73	.14	.11	932	809.8	99.3	43.4
60.00	0.85	0.00	-0.05	.80	.10	.07	951	809.0	98.1	42.2
60.50	0.95	0.00	-0.05	.90	.04	.01	974	808.2	97.0	41.0
61.00	1.12	0.00	-0.05	1.07	-16.96	-16.93	1008	807.4	95.9	39.8
61.50	1.17	0.00	-0.05	1.12	.94	.91	1016	806.7	94.9	38.6
62.00	1.21	0.00	-0.05	1.16	.92	.90	1022	805.9	93.8	37.4
62.50	1.25	0.00	-0.05	1.20	.90	.88	1030	805.1	92.7	36.1

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41363.00	1.23	0.00	-0.05	1.18	-16.90	-16.88	1027	804.3	91.6	34.9
63.50	1.24	0.00	-0.06	1.19	.89	.88	1029	803.5	90.5	33.7
64.00	1.25	0.00	-0.06	1.19	.89	.88	1030	802.8	89.4	32.5
64.50	1.46	0.00	-0.06	1.40	.81	.80	1060	802.0	88.4	31.3
65.00	2.60	0.00	-0.06	2.54	.54	.53	1164	801.3	87.3	30.1
65.50	2.55	0.00	-0.06	2.50	.54	.54	1161	800.6	86.2	28.9
66.00	2.61	0.00	-0.06	2.55	.53	.53	1165	799.9	85.2	27.6
66.50	2.50	0.00	-0.06	2.45	.54	.54	1161	799.2	84.1	26.4
67.00	2.63	0.00	-0.06	2.57	.51	.52	1170	798.5	83.1	25.2
67.50	2.84	0.00	-0.06	2.78	.47	.48	1185	797.8	82.0	24.0
68.00	2.91	0.00	-0.06	2.85	.45	.47	1189	797.2	80.9	22.8
68.50	3.06	0.00	-0.06	3.01	.42	.44	1200	796.6	79.9	21.6
69.00	3.01	0.00	-0.06	2.95	.43	.45	1196	796.0	78.9	20.3
69.50	3.03	0.00	-0.06	2.97	.43	.45	1195	795.4	77.8	19.1
70.00	2.89	0.00	-0.06	2.84	.44	.47	1187	794.8	76.8	17.9
70.50	2.81	0.00	-0.05	2.75	.46	.48	1181	794.3	75.7	16.7
71.00	2.82	0.00	-0.05	2.77	.45	.47	1183	793.8	74.7	15.5
71.50	3.20	0.00	-0.05	3.15	.38	.41	1209	793.3	73.6	14.2
72.00	3.50	0.00	-0.05	3.44	.33	.36	1226	792.8	72.6	13.0
72.50	3.02	0.00	-0.05	2.97	.40	.43	1197	792.4	71.6	11.8
73.00	2.57	0.00	-0.05	2.52	.47	.51	1166	792.0	70.5	10.6
73.50	2.32	0.00	-0.05	2.27	.53	.56	1146	791.6	69.5	9.4
74.00	2.28	0.00	-0.05	2.23	.54	.58	1140	791.2	68.5	8.1
74.50	2.23	0.00	-0.05	2.19	.55	.59	1136	790.9	67.4	6.9
75.00	2.40	0.00	-0.04	2.35	.51	.55	1149	790.6	66.4	5.7
75.50	2.38	0.00	-0.04	2.33	.51	.55	1147	790.4	65.3	4.5
76.00	2.38	0.00	-0.04	2.34	.51	.56	1145	790.2	64.3	3.3
76.50	2.38	0.00	-0.04	2.35	.51	.56	1144	790.0	63.3	2.0
77.00	2.34	0.00	-0.04	2.30	.52	.57	1139	789.9	62.2	0.8
77.50	2.29	0.00	-0.03	2.25	.53	.57	1137	789.8	61.2	-0.4
78.00	2.31	0.00	-0.03	2.28	.51	.56	1142	789.7	60.2	-1.6
78.50	2.49	0.00	-0.03	2.46	.48	.53	1154	789.7	59.1	-2.9
79.00	2.57	0.00	-0.03	2.54	.46	.51	1160	789.7	58.1	-4.1
79.50	2.51	0.00	-0.03	2.49	.47	.51	1158	789.7	57.1	-5.3
80.00	2.48	0.00	-0.02	2.46	.47	.52	1156	789.8	56.0	-6.5
80.50	2.27	0.00	-0.02	2.25	.51	.56	1140	789.9	55.0	-7.8
81.00	2.24	0.00	-0.02	2.22	.52	.57	1137	790.1	54.0	-9.0
81.50	2.26	0.00	-0.02	2.24	.52	.56	1137	790.3	52.9	-10.2
82.00	2.20	0.00	-0.01	2.18	.52	.57	1134	790.5	51.9	-11.5
41382.20	2.18	0.00	-0.01	2.17	-16.52	-16.57	1135	790.6	51.5	-11.9
82.40	2.02	0.00	-0.01	2.01	.55	.60	1124	790.8	51.0	-12.4
82.60	2.17	0.00	-0.01	2.16	.52	.57	1134	790.9	50.6	-12.9
82.80	2.17	0.00	-0.01	2.16	.53	.57	1132	791.0	50.2	-13.4
83.00	2.81	0.00	-0.01	2.80	.41	.45	1177	791.1	49.8	-13.9
83.20	4.09	0.00	-0.01	4.09	.23	.27	1251	791.3	49.4	-14.4
83.40	3.12	0.00	0.00	3.12	.34	.38	1206	791.4	48.9	-14.9
83.60	3.12	0.00	0.00	3.11	.34	.38	1203	791.6	48.5	-15.4
83.80	2.79	0.00	0.00	2.79	.40	.43	1183	791.7	48.1	-15.9
84.00	2.46	0.00	0.00	2.46	.46	.50	1159	791.9	47.7	-16.4
41384.50	2.24	0.00	0.00	2.24	-16.50	-16.54	1142	792.3	46.6	-17.6
85.00	2.20	0.01	0.00	2.21	.51	.55	1138	792.8	45.6	-18.8
85.50	2.16	0.03	0.01	2.19	.52	.55	1136	793.3	44.5	-20.0
86.00	2.11	0.05	0.01	2.17	.53	.56	1133	793.9	43.5	-21.3
86.50	2.07	0.07	0.01	2.15	.54	.57	1128	794.5	42.4	-22.5
87.00	1.97	0.09	0.01	2.08	.56	.58	1122	795.1	41.3	-23.7
87.50	1.90	0.11	0.02	2.03	.57	.59	1118	795.8	40.3	-25.0
88.00	1.82	0.13	0.02	1.98	.59	.61	1112	796.5	39.2	-26.2
88.50	1.80	0.15	0.02	1.97	.60	.61	1110	797.2	38.1	-27.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41389.00	1.77	0.17	0.03	1.97	-16.60	-16.61	1111	798.0	37.0	-28.6
89.50	1.80	0.19	0.03	2.02	.59	.59	1115	798.8	35.9	-29.9
90.00	1.88	0.22	0.03	2.12	.57	.57	1122	799.7	34.8	-31.1
90.50	1.90	0.24	0.03	2.17	.57	.56	1124	800.5	33.7	-32.3
91.00	1.90	0.26	0.04	2.19	.57	.56	1124	801.4	32.6	-33.6
91.50	2.00	0.27	0.04	2.31	.55	.54	1132	802.4	31.5	-34.8
92.00	2.22	0.29	0.04	2.56	.50	.48	1153	803.3	30.4	-36.0
92.50	3.32	0.32	0.05	3.69	.33	.31	1218	804.3	29.3	-37.2
93.00	2.77	0.34	0.05	3.16	.41	.38	1189	805.4	28.1	-38.5
93.50	2.56	0.35	0.05	2.96	.44	.41	1177	806.4	27.0	-39.7
94.00	2.42	0.37	0.05	2.85	.46	.43	1172	807.5	25.8	-40.9
94.50	2.30	0.39	0.06	2.75	.48	.44	1164	808.5	24.7	-42.1
95.00	2.21	0.41	0.06	2.68	.51	.46	1156	809.7	23.5	-43.4
95.50	2.12	0.43	0.06	2.61	.53	.48	1149	810.8	22.3	-44.6
96.00	2.08	0.45	0.06	2.59	.53	.48	1148	811.9	21.1	-45.8
96.50	1.99	0.46	0.07	2.51	.55	.50	1142	813.1	19.9	-47.0
97.00	1.90	0.48	0.07	2.46	.57	.50	1138	814.3	18.7	-48.3
97.50	1.80	0.49	0.07	2.44	.57	.51	1137	815.5	17.5	-49.5
98.00	1.80	0.51	0.07	2.38	.59	.51	1133	816.7	16.2	-50.7
98.50	1.78	0.52	0.07	2.38	.59	.51	1133	817.9	14.9	-51.9
99.00	1.76	0.54	0.08	2.37	.60	.51	1131	819.2	13.6	-53.1
99.50	1.66	0.55	0.08	2.29	.62	.53	1125	820.4	12.3	-54.4
41400.00	1.82	0.56	0.08	2.46	.59	.49	1138	821.7	11.0	-55.6
00.50	1.87	0.57	0.08	2.53	.57	.47	1145	823.0	9.6	-56.8
01.00	1.64	0.59	0.09	2.31	.62	.51	1129	824.2	8.2	-58.0
01.50	1.27	0.60	0.09	1.96	.70	.59	1098	825.5	6.8	-59.2
02.00	0.73	0.61	0.09	1.43	.85	.74	1042	826.8	5.4	-60.4
02.50	0.70	0.62	0.09	1.41	.86	.75	1039	828.1	3.9	-61.6
03.00	0.69	0.63	0.09	1.42	.85	.74	1040	829.4	2.3	-62.8
03.50	0.81	0.64	0.09	1.55	.82	.70	1055	830.7	0.8	-64.0
04.00	0.96	0.65	0.10	1.71	.78	.66	1072	832.0	359.2	-65.2
04.50	0.82	0.66	0.10	1.58	.82	.70	1058	833.3	357.5	-66.4
05.00	0.61	0.67	0.10	1.37	.88	.77	1034	834.6	355.8	-67.6
05.50	0.31	0.67	0.10	1.08	.99	.87	988	835.9	354.0	-68.8
06.00	0.35	0.68	0.10	1.13	.97	.83	996	837.2	352.1	-70.0
06.50	0.57	0.69	0.10	1.36	.89	.75	1030	838.4	350.2	-71.1
07.00	0.43	0.69	0.10	1.22	.94	.81	1010	839.7	348.1	-72.3
07.50	0.15	0.70	0.10	.95	-17.05	.92	962	841.0	346.0	-73.4
08.00	-0.02	0.70	0.10	.79	.14	-17.00	922	842.2	343.7	-74.6
08.50	0.09	0.71	0.10	.90	.08	-16.94	949	843.5	341.3	-75.7
09.00	0.25	0.71	0.11	1.07	.01	.86	984	844.7	338.7	-76.8
09.50	0.02	0.71	0.11	.84	.11	.97	934	846.0	336.0	-77.9
10.00	-0.20	0.71	0.11	.62	.24	-17.11	869	847.2	333.1	-79.0
10.50	-0.12	0.71	0.11	.70	.19	.06	899	848.4	329.9	-80.0
11.00	-0.17	0.72	0.11	.65	.22	.08	877	849.6	326.5	-81.1
11.50	0.06	0.72	0.11	.88	.10	-16.95	943	850.7	322.7	-82.1
12.00	0.32	0.72	0.11	1.14	-16.99	.83	997	851.9	318.6	-83.0
12.50	0.37	0.72	0.11	1.19	.97	.81	1005	853.0	314.2	-83.9
13.00	0.05	0.72	0.11	.88	-17.10	.94	943	854.1	309.3	-84.8
13.50	-0.01	0.71	0.11	.81	.14	.98	925	855.2	303.9	-85.6
14.00	0.00	0.71	0.11	.82	.13	.97	926	856.3	298.1	-86.3
14.50	0.17	0.71	0.11	.98	.06	.89	966	857.4	291.7	-86.9
15.00	0.21	0.71	0.10	1.02	.04	.87	973	858.4	284.9	-87.5
15.50	0.20	0.70	0.10	1.01	.05	.88	972	859.4	277.8	-87.9
16.00	0.19	0.70	0.10	.99	.06	.88	967	860.4	270.3	-88.2
16.50	0.21	0.70	0.10	1.01	.05	.88	972	861.3	262.8	-88.4
17.00	0.20	0.69	0.10	1.00	.05	.88	972	862.3	255.4	-88.5
17.50	0.19	0.69	0.10	.98	.06	.89	965	863.2	248.2	-88.4
18.00	0.19	0.68	0.10	.97	.07	.89	960	864.1	241.4	-88.3
18.50	0.21	0.67	0.10	.98	.07	.88	963	864.9	235.0	-88.0

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41419.00	0.28	0.67	0.09	1.04	-17.04	-16.86	977	865.7	229.1	-87.6
19.50	0.38	0.66	0.09	1.14	.00	.82	996	866.5	223.7	-87.2
20.00	0.43	0.65	0.09	1.17	.00	.80	1000	867.3	218.8	-86.7
20.50	0.43	0.65	0.09	1.16	.00	.80	998	868.0	214.3	-86.2
21.00	0.40	0.64	0.09	1.13	.01	.82	994	868.7	210.1	-85.6
21.50	0.45	0.63	0.09	1.17	-16.99	.80	1002	869.4	206.4	-84.9
22.00	0.45	0.62	0.09	1.16	-17.00	.81	1002	870.0	202.9	-84.3
22.50	0.30	0.61	0.08	.99	.07	.88	967	870.7	199.7	-83.6
23.00	0.27	0.60	0.08	.96	.08	.89	959	871.2	196.8	-82.9
23.50	0.25	0.59	0.08	.92	.10	.91	950	871.8	194.0	-82.1
24.00	0.25	0.58	0.08	.91	.10	.92	948	872.3	191.5	-81.4
24.50	0.25	0.57	0.08	.90	.11	.92	945	872.8	189.0	-80.6
25.00	0.59	0.56	0.08	1.23	-16.98	.79	1016	873.2	186.7	-79.8
25.50	0.83	0.54	0.08	1.45	.91	.71	1049	873.6	184.6	-79.0
26.00	0.55	0.53	0.07	1.16	-17.01	.81	1000	874.0	182.5	-78.2
26.50	0.25	0.52	0.07	.84	.15	.95	925	874.3	180.6	-77.4
27.00	0.07	0.51	0.07	.65	.25	-17.07	864	874.6	178.7	-76.5
27.50	0.13	0.49	0.07	.69	.22	.05	882	874.9	176.9	-75.7
28.00	0.53	0.48	0.06	1.07	.04	-16.85	985	875.1	175.1	-74.9
28.50	0.38	0.47	0.06	.91	.12	.92	943	875.3	173.4	-74.0
29.00	0.15	0.45	0.06	.66	.25	-17.07	868	875.4	171.6	-73.2
29.50	0.16	0.44	0.06	.66	.25	.07	872	875.6	170.2	-72.3
30.00	0.20	0.42	0.05	.67	.24	.06	873	875.7	168.7	-71.4
30.50	0.23	0.41	0.05	.69	.23	.05	879	875.7	167.2	-70.6
31.00	0.24	0.39	0.05	.69	.23	.05	881	875.7	165.7	-69.7
31.50	0.20	0.38	0.05	.63	.27	.09	859	875.7	164.3	-68.8
32.00	0.21	0.36	0.04	.62	.28	.10	857	875.6	162.9	-68.0
32.50	0.23	0.35	0.04	.61	.29	.11	854	875.5	161.5	-67.1
33.00	0.21	0.33	0.04	.58	.31	.14	842	875.4	160.1	-66.2
33.50	0.22	0.32	0.04	.57	.32	.15	838	875.3	158.8	-65.3
34.00	0.26	0.30	0.03	.59	.30	.13	847	875.1	157.5	-64.4
34.50	0.27	0.28	0.03	.59	.31	.13	847	874.8	156.2	-63.5
35.00	0.31	0.26	0.03	.61	.30	.12	853	874.6	154.9	-62.6
35.50	0.46	0.25	0.03	.73	.22	.04	895	874.3	153.6	-61.7
36.00	0.55	0.23	0.02	.80	.19	.00	918	874.0	152.4	-60.8
36.50	0.56	0.21	0.02	.79	.19	.00	914	873.6	151.2	-59.9
37.00	0.52	0.20	0.02	.74	.23	.03	895	873.2	149.9	-59.0
37.50	0.41	0.18	0.01	.60	.31	.13	848	872.8	148.7	-58.1
38.00	0.35	0.16	0.01	.52	.37	.20	816	872.3	147.5	-57.2
38.50	0.34	0.14	0.01	.49	.40	.22	800	871.9	146.4	-56.3
39.00	0.35	0.12	0.01	.48	.41	.23	796	871.3	145.2	-55.4
39.50	0.39	0.11	0.01	.51	.38	.21	813	870.8	144.0	-54.5
40.00	0.41	0.09	0.00	.50	.39	.22	811	870.2	142.9	-53.6
40.50	0.43	0.07	0.00	.50	.39	.22	816	869.6	141.7	-52.6
41.00	0.39	0.05	0.00	.44	.44	.28	787	869.0	140.6	-51.7
41.50	0.41	0.04	-0.01	.44	.44	.28	790	868.4	139.4	-50.8
42.00	0.42	0.02	-0.01	.44	.44	.28	791	867.7	138.3	-49.9
42.50	0.41	0.00	-0.01	.41	.47	.31	776	867.0	137.2	-49.0
43.00	0.48	-0.01	-0.01	.46	.42	.26	805	866.2	136.1	-48.0
43.50	0.50	-0.03	-0.02	.45	.44	.27	797	865.5	134.9	-47.1
44.00	0.57	-0.05	-0.02	.50	.39	.23	825	864.7	133.6	-46.2
44.50	0.56	-0.06	-0.02	.48	.41	.25	821	863.9	132.7	-45.3
45.00	0.60	-0.08	-0.02	.50	.39	.23	835	863.1	131.6	-44.3
45.50	0.65	-0.10	-0.02	.52	.37	.22	846	862.3	130.5	-43.4
46.00	0.66	-0.11	-0.03	.52	.38	.22	845	861.4	129.4	-42.5
46.50	0.71	-0.13	-0.03	.55	.36	.19	855	860.6	128.3	-41.5
47.00	0.75	-0.14	-0.03	.58	.34	.16	867	859.7	127.2	-40.6
47.50	0.79	-0.16	-0.03	.60	.33	.15	878	858.8	126.2	-39.7
48.00	0.86	-0.17	-0.03	.65	.29	.11	900	857.9	125.1	-38.7
48.50	0.93	-0.19	-0.04	.71	.25	.08	923	856.9	124.0	-37.8

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41449.00	0.97	-0.20	-0.04	.74	-17.23	-17.06	933	856.0	122.9	-36.9
49.50	1.02	-0.21	-0.04	.76	.22	.04	940	855.1	121.8	-35.9
50.00	1.06	-0.23	-0.04	.79	.21	.03	951	854.1	120.8	-35.0
50.50	1.08	-0.24	-0.04	.80	.20	.03	956	853.1	119.7	-34.0
51.00	1.09	-0.25	-0.05	.80	.20	.02	957	852.1	118.6	-33.1
51.50	1.21	-0.25	-0.05	.91	.14	-16.96	984	851.2	117.6	-32.2
52.00	1.23	-0.26	-0.05	.92	.14	.96	988	850.2	116.5	-31.2
52.50	1.30	-0.27	-0.05	.98	.11	.93	1002	849.2	115.4	-30.3
53.00	1.86	-0.28	-0.05	1.53	-16.91	.72	1086	848.2	114.3	-29.3
53.50	1.57	-0.28	-0.06	1.23	-17.00	.81	1050	847.2	113.3	-28.4
54.00	1.30	-0.28	-0.06	.96	.11	.93	1004	846.1	112.2	-27.4
54.50	1.26	-0.28	-0.06	.93	.12	.95	1000	845.1	111.1	-26.5
55.00	1.23	-0.27	-0.06	.89	.14	.96	994	844.1	110.1	-25.5
55.50	1.19	-0.27	-0.06	.86	.15	.98	991	843.1	109.0	-24.6
56.00	1.16	-0.26	-0.06	.84	.16	.99	987	842.1	107.9	-23.6
56.50	1.17	-0.24	-0.06	.86	.15	.99	993	841.1	106.9	-22.7
57.00	1.16	-0.23	-0.06	.87	.14	.98	997	840.1	105.8	-21.7
57.50	1.12	-0.20	-0.07	.86	.14	.99	996	839.2	104.8	-20.8
58.00	1.09	-0.16	-0.07	.85	.15	-17.00	996	838.2	103.7	-19.8
58.50	1.02	-0.11	-0.07	.84	.15	.00	995	837.2	102.6	-18.9
59.00	1.01	-0.03	-0.07	.91	.11	-16.97	1011	836.3	101.6	-17.9
59.50	0.95	0.00	-0.07	.88	.12	.98	1007	835.3	100.5	-17.0
60.00	0.88	0.00	-0.07	.81	.16	-17.02	995	834.4	99.4	-16.0
60.50	0.90	0.00	-0.07	.83	.14	.01	1001	833.4	98.3	-15.0
61.00	0.91	0.00	-0.07	.84	.13	.00	1005	832.5	97.3	-14.1
61.50	0.82	0.00	-0.07	.75	.18	.05	987	831.6	96.2	-13.1
62.00	0.83	0.00	-0.07	.76	.18	.05	990	830.8	95.1	-12.2
62.50	0.82	0.00	-0.07	.74	.18	.06	987	829.9	94.1	-11.2
63.00	0.85	0.00	-0.07	.78	.16	.03	999	829.0	93.0	-10.3
63.50	0.79	0.00	-0.07	.71	.19	.08	985	828.2	91.9	-9.3
64.00	0.77	0.00	-0.07	.69	.20	.09	981	827.4	90.8	-8.3
64.50	0.67	0.00	-0.07	.59	.27	.16	955	826.6	89.7	-7.4
65.00	0.64	0.00	-0.07	.57	.28	.18	951	825.9	88.7	-6.4
65.50	0.66	0.00	-0.07	.59	.26	.15	962	825.1	87.6	-5.5
66.00	0.84	0.00	-0.07	.76	.15	.04	1005	824.4	86.5	-4.5
66.50	0.82	0.00	-0.07	.75	.15	.05	1003	823.7	85.4	-3.5
67.00	0.76	0.00	-0.07	.69	.19	.09	991	823.1	84.3	-2.6
67.50	0.69	0.00	-0.07	.61	.24	.14	974	822.4	83.2	-1.6
68.00	0.72	0.00	-0.07	.64	.21	.11	985	821.8	82.1	-0.6
68.50	0.74	0.00	-0.07	.67	.18	.09	995	821.2	81.0	0.3
69.00	0.81	0.00	-0.07	.74	.14	.05	1011	820.7	79.9	1.3
69.50	0.86	0.00	-0.07	.79	.11	.02	1022	820.1	78.8	2.2
70.00	0.87	0.00	-0.07	.81	.10	.01	1028	819.6	77.7	3.2
70.50	0.89	0.00	-0.07	.82	.09	.00	1033	819.2	76.6	4.2
71.00	0.95	0.00	-0.06	.88	.05	-16.96	1047	818.7	75.5	5.1
71.50	0.98	0.00	-0.06	.91	.03	.94	1055	818.4	74.3	6.1
72.00	1.06	0.00	-0.06	1.00	-16.98	.89	1072	818.0	73.2	7.1
72.50	1.16	0.00	-0.06	1.10	.93	.85	1089	817.7	72.1	8.0
73.00	1.42	0.00	-0.06	1.36	.83	.75	1125	817.4	70.9	9.0
73.50	1.41	0.00	-0.06	1.35	.83	.75	1126	817.1	69.8	10.0
74.00	1.40	0.00	-0.06	1.35	.83	.75	1127	816.9	68.7	11.0
74.50	1.37	0.00	-0.05	1.31	.84	.76	1124	816.7	67.5	11.9
75.00	1.40	0.00	-0.05	1.35	.82	.74	1132	816.6	66.3	12.9
75.50	1.46	0.00	-0.05	1.41	.80	.72	1141	816.5	65.2	13.9
76.00	1.50	0.00	-0.05	1.45	.79	.71	1145	816.4	64.0	14.9
76.50	1.50	0.00	-0.05	1.45	.79	.71	1145	816.4	62.8	15.8
77.00	1.50	0.00	-0.04	1.46	.79	.71	1146	816.4	61.6	16.8
77.50	1.48	0.00	-0.04	1.43	.80	.72	1143	816.5	60.4	17.8
78.00	1.42	0.00	-0.04	1.38	.82	.74	1137	816.6	59.2	18.8
78.50	1.37	0.00	-0.04	1.33	.84	.76	1133	816.7	58.0	19.7

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41479.00	1.36	0.00	-0.04	1.32	-16.84	-16.76	1132	816.9	56.8	20.7
79.50	1.30	0.00	-0.03	1.27	.86	.78	1126	817.1	55.5	21.7
80.00	1.26	0.00	-0.03	1.23	.88	.80	1121	817.4	54.3	22.7
80.50	1.20	0.00	-0.03	1.17	.90	.82	1114	817.7	53.0	23.6
81.00	1.21	0.00	-0.03	1.18	.90	.81	1118	818.0	51.8	24.6
81.50	1.19	0.00	-0.03	1.17	.90	.81	1118	818.5	50.5	25.6
82.00	1.20	0.00	-0.02	1.18	.89	.80	1121	818.9	49.2	26.6
82.50	1.26	0.01	-0.02	1.25	.87	.78	1131	819.4	47.8	27.6
83.00	1.26	0.03	-0.02	1.27	.86	.77	1136	819.9	46.5	28.5
83.50	1.29	0.04	-0.02	1.32	.85	.75	1143	820.5	45.1	29.5
84.00	1.22	0.06	-0.01	1.27	.87	.77	1135	821.1	43.7	30.5
84.50	1.24	0.09	-0.01	1.32	.86	.76	1142	821.7	42.3	31.5
85.00	1.27	0.10	-0.01	1.36	.85	.74	1148	822.4	40.9	32.5
41485.20	1.53	0.11	-0.01	1.63	-16.77	-16.66	1178	822.7	40.3	32.9
85.40	1.68	0.12	-0.01	1.79	.72	.61	1195	823.0	39.7	33.2
85.60	1.99	0.13	-0.01	2.11	.65	.53	1225	823.3	39.2	33.6
85.80	2.46	0.13	-0.01	2.59	.54	.43	1265	823.6	38.6	34.0
86.00	2.93	0.14	0.00	3.07	.46	.35	1300	824.0	38.0	34.4
86.20	3.40	0.15	0.00	3.55	.39	.27	1333	824.3	37.4	34.8
86.40	4.03	0.16	0.00	4.19	.31	.20	1368	824.6	36.8	35.2
86.60	3.70	0.16	0.00	3.86	.35	.24	1349	825.0	36.1	35.6
86.80	1.92	0.17	0.00	2.09	.62	.51	1237	825.3	35.5	36.0
87.00	1.26	0.18	0.00	1.44	.79	.67	1175	825.7	34.9	36.4
41487.50	1.22	0.20	0.00	1.42	-16.83	-16.70	1166	826.6	33.3	37.3
88.00	0.80	0.22	0.00	1.02	.99	.85	1112	827.5	31.7	38.3
88.50	0.61	0.24	0.01	.86	-17.08	.94	1084	828.5	30.0	39.3
89.00	0.55	0.26	0.01	.82	.11	.97	1075	829.5	28.2	40.3
89.50	0.57	0.28	0.01	.86	.09	.95	1082	830.5	26.5	41.2
90.00	0.66	0.30	0.01	.97	.04	.89	1101	831.6	24.6	42.2
90.50	0.60	0.32	0.02	.93	.06	.91	1097	832.7	22.7	43.1
91.00	0.56	0.34	0.02	.92	.07	.91	1096	833.9	20.6	44.1
91.50	0.55	0.35	0.02	.92	.08	.91	1097	835.0	18.5	45.0
92.00	0.53	0.37	0.02	.93	.08	.91	1097	836.3	16.3	46.0
92.50	0.50	0.39	0.03	.91	.10	.92	1093	837.5	14.0	46.9
93.00	0.46	0.41	0.03	.89	.12	.94	1090	838.7	11.6	47.8
93.50	0.44	0.42	0.03	.90	.12	.94	1090	840.0	9.0	48.7
94.00	0.38	0.44	0.03	.85	.16	.97	1081	841.3	6.2	49.6
94.50	0.36	0.45	0.04	.85	.16	.96	1083	842.7	3.2	50.5
95.00	0.32	0.47	0.04	.83	.18	.98	1079	844.0	0.0	51.3
95.50	0.31	0.48	0.04	.83	.19	.98	1079	845.4	356.6	52.2
96.00	0.43	0.50	0.04	.97	.12	.90	1105	846.8	352.9	53.0
96.50	0.34	0.51	0.04	.89	.16	.94	1093	848.2	348.8	53.7
97.00	0.25	0.53	0.04	.82	.21	.98	1079	849.6	344.4	54.5
97.50	0.21	0.54	0.05	.79	.23	-17.00	1074	851.1	339.6	55.1
98.00	0.17	0.55	0.05	.77	.25	.01	1071	852.5	334.4	55.8
98.50	0.08	0.57	0.05	.70	.30	.06	1056	854.0	328.6	56.3
99.00	0.04	0.58	0.05	.67	.32	.09	1049	855.4	322.5	56.8
99.50	0.03	0.59	0.05	.68	.32	.08	1052	856.9	315.9	57.2
41500.00	0.05	0.60	0.06	.70	.31	.06	1058	858.4	308.9	57.5
00.50	0.06	0.61	0.06	.73	.30	.05	1064	859.9	301.6	57.7
01.00	0.00	0.62	0.06	.68	.34	.07	1055	861.4	294.3	57.8
01.50	-0.03	0.63	0.06	.66	.35	.08	1051	862.9	286.9	57.7
02.00	-0.04	0.64	0.06	.66	.36	.09	1051	864.3	279.8	57.6
02.50	-0.02	0.64	0.07	.69	.35	.07	1058	865.8	272.9	57.3
03.00	-0.05	0.65	0.07	.67	.37	.09	1054	867.3	266.5	56.9
03.50	-0.08	0.66	0.07	.65	.39	.10	1050	868.8	260.5	56.5
04.00	-0.06	0.66	0.07	.68	.37	.08	1057	870.3	255.0	56.0
04.50	-0.01	0.67	0.07	.74	.34	.04	1071	871.7	249.9	55.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41505.00	0.05	0.68	0.07	.79	-17.32	-17.01	1081	873.2	245.3	54.8
05.50	0.07	0.68	0.07	.83	.30	-16.98	1089	874.6	241.0	54.1
06.00	0.10	0.69	0.07	.86	.29	.96	1096	876.1	237.1	53.4
06.50	0.13	0.69	0.08	.89	.28	.95	1101	877.5	233.5	52.7
07.00	0.03	0.69	0.08	.80	.33	-17.01	1086	878.9	230.2	51.9
07.50	-0.14	0.69	0.08	.63	.44	.12	1050	880.3	227.1	51.1
08.00	-0.29	0.70	0.08	.49	.55	.23	1008	881.7	224.2	50.3
08.50	-0.35	0.70	0.08	.42	.62	.30	983	883.0	221.5	49.5
09.00	-0.37	0.70	0.08	.41	.63	.32	981	884.4	219.0	48.6
09.50	-0.33	0.70	0.08	.45	.59	.28	999	885.7	216.6	47.8
10.00	-0.31	0.70	0.08	.47	.58	.27	1008	887.0	214.3	46.9
10.50	-0.34	0.70	0.08	.44	.61	.29	996	888.3	212.2	46.0
11.00	-0.37	0.70	0.08	.41	.64	.33	985	889.5	210.1	45.1
11.50	-0.40	0.70	0.08	.38	.67	.37	977	890.7	208.1	44.2
12.00	-0.43	0.70	0.08	.35	.70	.41	963	891.9	206.3	43.3
12.50	-0.43	0.70	0.08	.35	.71	.41	965	893.1	204.4	42.4
13.00	-0.42	0.70	0.08	.35	.71	.41	963	894.3	202.7	41.5
13.50	-0.42	0.69	0.08	.35	.71	.41	962	895.4	201.0	40.6
14.00	-0.42	0.69	0.08	.35	.72	.41	960	896.5	199.3	39.7
14.50	-0.40	0.69	0.08	.37	.70	.38	968	897.6	197.7	38.8
15.00	-0.48	0.68	0.08	.28	.83	.51	909	898.6	196.2	37.9
15.50	-0.48	0.68	0.08	.28	.83	.51	911	899.6	194.6	37.0
16.00	-0.51	0.67	0.08	.24	.89	.58	875	900.6	193.1	36.0
16.50	-0.48	0.67	0.08	.26	.86	.55	895	901.5	191.7	35.1
17.00	-0.46	0.66	0.08	.27	.84	.54	911	902.4	190.3	34.2
17.50	-0.52	0.65	0.08	.21	.95	.65	848	903.3	188.9	33.3
18.00	-0.50	0.64	0.08	.23	.91	.61	865	904.1	187.5	32.3
18.50	-0.50	0.64	0.08	.21	.95	.65	841	904.9	186.1	31.4
19.00	-0.51	0.63	0.08	.20	.97	.68	836	905.7	184.8	30.5
19.50	-0.46	0.63	0.08	.24	.88	.61	889	906.4	183.5	29.5
20.00	-0.47	0.62	0.08	.23	.90	.63	878	907.1	182.2	28.6
20.50	-0.45	0.61	0.08	.24	.89	.61	884	907.8	180.9	27.7
21.00	-0.43	0.61	0.07	.25	.89	.58	882	908.4	179.6	26.7
21.50	-0.47	0.60	0.07	.21	.97	.65	825	908.9	178.4	25.8
22.00	-0.50	0.59	0.07	.16	-18.08	.78	753	909.5	177.1	24.9
22.50	-0.43	0.58	0.07	.22	-17.94	.64	851	910.0	175.9	24.0
23.00	-0.24	0.58	0.07	.41	.69	.36	982	910.4	174.7	23.0
23.50	-0.20	0.57	0.07	.44	.67	.31	987	910.8	173.5	22.1
24.00	-0.26	0.56	0.07	.37	.74	.40	955	911.2	172.3	21.2
24.50	-0.32	0.55	0.07	.30	.82	.50	909	911.6	171.1	20.2
25.00	-0.31	0.54	0.07	.30	.82	.50	908	911.9	170.0	19.3
25.50	-0.32	0.53	0.07	.28	.85	.53	894	912.1	168.8	18.4
26.00	-0.28	0.52	0.07	.30	.81	.51	915	912.3	167.7	17.4
26.50	-0.29	0.51	0.06	.28	.84	.54	899	912.5	166.5	16.5
27.00	-0.28	0.50	0.06	.28	.84	.54	898	912.6	165.4	15.6
27.50	-0.34	0.48	0.06	.20	.98	.68	811	912.7	164.2	14.6
28.00	-0.36	0.47	0.06	.17	-18.06	.75	763	912.8	163.1	13.7
28.50	-0.29	0.46	0.06	.22	-17.95	.64	830	912.8	162.0	12.8
29.00	-0.31	0.45	0.06	.20	.99	.68	798	912.8	160.9	11.8
29.50	-0.25	0.43	0.06	.25	.89	.58	857	912.8	159.8	10.9
30.00	-0.18	0.42	0.06	.29	.84	.51	885	912.7	158.7	10.0
30.50	-0.15	0.41	0.05	.32	.80	.45	902	912.5	157.6	9.1
31.00	-0.13	0.40	0.05	.31	.81	.47	896	912.4	156.5	8.1
31.50	-0.17	0.38	0.05	.26	.88	.55	852	912.2	155.4	7.2
32.00	-0.14	0.37	0.05	.28	.84	.52	873	912.0	154.3	6.3
32.50	-0.05	0.36	0.05	.36	.73	.41	932	911.7	153.2	5.4
41533.00	-0.01	0.35	0.05	.38	-17.71	-17.39	941	911.4	152.2	4.4
33.20	0.31	0.34	0.05	.70	.45	.11	1061	911.3	151.7	4.1
33.40	0.80	0.34	0.04	1.18	.25	-16.84	1141	911.2	151.3	3.7

Table 3 (cont.)

1968 66A (Explorer 38)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_n$	$\log \rho_o$	$\log \rho_S$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41533.60	0.80	0.34	0.04	1.18	-17.25	-16.83	1140	911.1	150.9	3.3
33.80	0.97	0.33	0.04	1.34	.19	.80	1166	910.9	150.4	2.9
34.00	1.13	0.33	0.04	1.50	.14	.73	1182	910.8	150.0	2.6
34.20	1.30	0.32	0.04	1.66	.09	.64	1202	910.6	149.6	2.2
34.40	1.14	0.32	0.04	1.50	.13	.66	1192	910.5	149.2	1.8
34.60	0.99	0.31	0.04	1.34	.19	.74	1164	910.3	148.7	1.5
34.80	0.51	0.31	0.04	.85	.38	.93	1087	910.2	148.3	1.1
35.00	0.35	0.30	0.04	.69	.47	-17.02	1050	910.0	147.9	0.7
41535.50	0.22	0.29	0.04	.55	-17.57	-17.15	999	909.6	146.8	-0.2
36.00	0.02	0.28	0.04	.34	.77	.38	890	909.1	145.8	-1.1
36.50	-0.07	0.26	0.04	.23	.93	.57	782	908.7	144.7	-2.0
37.00	-0.06	0.25	0.03	.23	.91	.59	797	908.2	143.7	-3.0
37.50	-0.02	0.24	0.03	.25	.86	.56	827	907.7	142.6	-3.9
38.00	0.17	0.23	0.03	.43	.63	.31	953	907.2	141.6	-4.8
38.50	0.26	0.22	0.03	.50	.58	.22	976	906.6	140.5	-5.7
39.00	0.19	0.20	0.03	.42	.64	.31	940	906.0	139.5	-6.6
39.50	0.02	0.19	0.03	.23	.89	.58	789	905.5	138.4	-7.5
40.00	-0.02	0.17	0.02	.18	.99	.68	668	904.9	137.4	-8.5
40.50	0.02	0.16	0.02	.21	.92	.62	758	904.3	136.3	-9.4
41.00	0.08	0.15	0.02	.25	.84	.54	812	903.7	135.3	-10.3
41.50	0.07	0.14	0.02	.23	.86	.59	795	903.1	134.3	-11.2
42.00	0.10	0.12	0.02	.25	.81	.55	824	902.4	133.2	-12.1
42.50	0.09	0.11	0.02	.22	.86	.61	791	901.8	132.2	-13.0
43.00	0.08	0.10	0.02	.19	.92	.67	749	901.2	131.1	-13.9
43.50	0.09	0.09	0.02	.19	.92	.67	742	900.5	130.1	-14.8
44.00	0.10	0.08	0.01	.19	.92	.66	738	899.9	129.1	-15.8
44.50	0.14	0.06	0.01	.22	.85	.60	780	899.2	128.0	-16.7
45.00	0.15	0.05	0.01	.22	.84	.60	779	898.6	127.0	-17.6
45.50	0.19	0.04	0.01	.25	.78	.54	816	897.9	126.0	-18.5
46.00	0.23	0.03	0.01	.28	.73	.49	848	897.3	124.9	-19.4
46.50	0.20	0.02	0.01	.22	.83	.59	780	896.7	123.9	-20.3
47.00	0.26	0.01	0.01	.28	.72	.48	840	896.0	122.9	-21.2
47.50	0.28	0.00	0.01	.28	.72	.47	835	895.4	121.8	-22.1
48.00	0.29	-0.01	0.01	.29	.71	.45	837	894.8	120.8	-23.0
48.50	0.31	-0.01	0.00	.30	.69	.43	845	894.2	119.8	-23.9
49.00	0.35	-0.01	0.00	.34	.63	.37	878	893.6	118.7	-24.8
49.50	0.39	-0.02	0.00	.37	.60	.33	897	893.0	117.7	-25.7
50.00	0.41	-0.02	0.00	.39	.57	.30	906	892.4	116.6	-26.6
50.50	0.43	-0.02	0.00	.41	.55	.27	917	891.8	115.6	-27.5
51.00	0.42	-0.02	0.00	.40	.55	.28	911	891.3	114.6	-28.4
51.50	0.44	-0.01	0.00	.43	.52	.25	928	890.7	113.5	-29.3
52.00	0.46	-0.01	0.00	.45	.49	.23	941	890.2	112.5	-30.2
52.50	0.48	0.00	0.00	.48	.45	.21	957	889.7	111.4	-31.1
53.00	0.45	0.00	0.00	.44	.49	.24	937	889.2	110.4	-32.0
53.50	0.44	0.00	-0.01	.44	.48	.24	936	888.7	109.3	-32.9
54.00	0.47	0.00	-0.01	.46	.46	.22	945	888.3	108.3	-33.8
54.50	0.51	0.00	-0.01	.51	.41	.17	967	887.8	107.2	-34.6
55.00	0.56	0.00	-0.01	.55	.38	.12	979	887.4	106.1	-35.5
55.50	0.69	0.00	-0.01	.68	.29	.02	1020	887.0	105.1	-36.4
56.00	0.82	0.00	-0.01	.81	.22	-16.93	1053	886.6	104.0	-37.3
56.50	0.87	0.00	-0.01	.86	.19	.89	1064	886.3	102.9	-38.2
57.00	0.89	0.00	-0.01	.88	.18	.89	1069	886.0	101.9	-39.1
57.50	0.89	0.00	-0.01	.88	.17	.89	1069	885.6	100.8	-40.0
58.00	0.90	0.00	-0.01	.88	.17	.88	1068	885.4	99.7	-40.8
58.50	0.92	0.00	-0.01	.91	.15	.87	1074	885.1	98.6	-41.7
59.00	0.98	0.00	-0.01	.97	.12	.83	1086	884.9	97.5	-42.6
59.50	1.03	0.00	-0.01	1.02	.10	.80	1095	884.6	96.4	-43.5
60.00	1.04	0.00	-0.01	1.03	.09	.79	1096	884.4	95.3	-44.3
60.50	1.12	0.00	-0.01	1.11	.06	.76	1110	884.3	94.2	-45.2

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41561.00	1.13	0.00	-0.01	1.11	-17.05	-16.76	1110	884.2	93.1	-46.1
61.50	1.13	0.00	-0.01	1.12	.04	.76	1111	884.0	92.0	-47.0
62.00	1.06	0.00	-0.01	1.05	.07	.79	1099	884.0	90.8	-47.8
62.50	1.07	0.00	-0.01	1.06	.06	.78	1101	883.9	89.7	-48.7
63.00	1.03	0.00	-0.01	1.02	.08	.79	1092	883.9	88.5	-49.6
63.50	1.00	0.00	-0.01	.99	.09	.81	1087	883.9	87.4	-50.4
64.00	0.95	0.00	-0.01	.94	.11	.83	1077	883.9	86.2	-51.3
64.50	0.97	0.00	-0.01	.96	.10	.82	1081	884.0	85.0	-52.2
65.00	0.96	0.00	-0.01	.95	.10	.83	1079	884.0	83.8	-53.0
65.50	0.88	0.00	-0.01	.87	.13	.87	1062	884.2	82.6	-53.9
66.00	0.84	0.00	-0.01	.83	.15	.89	1052	884.3	81.4	-54.7
66.50	0.78	0.00	0.00	.77	.19	.92	1036	884.5	80.1	-55.6
67.00	0.82	0.00	0.00	.81	.16	.90	1046	884.7	78.9	-56.4
67.50	0.85	0.00	0.00	.85	.14	.88	1056	884.9	77.6	-57.3
68.00	0.81	0.00	0.00	.81	.16	.90	1046	885.2	76.3	-58.1
68.50	0.79	0.00	0.00	.79	.17	.91	1040	885.4	75.0	-59.0
69.00	0.75	0.00	0.00	.75	.20	.93	1029	885.8	73.7	-59.8
69.50	0.73	0.00	0.00	.73	.21	.94	1023	886.1	72.3	-60.7
70.00	0.71	0.00	0.01	.71	.22	.95	1016	886.5	70.9	-61.5
70.50	0.74	0.00	0.01	.74	.21	.92	1023	886.9	69.5	-62.3
71.00	0.71	0.00	0.01	.72	.22	.93	1017	887.3	68.0	-63.2
71.50	0.69	0.00	0.01	.69	.24	.96	1008	887.8	66.5	-64.0
72.00	0.58	0.00	0.01	.59	.30	-17.03	975	888.3	65.0	-64.8
72.50	0.60	0.00	0.01	.62	.28	.02	987	888.8	63.4	-65.6
73.00	0.63	0.00	0.01	.64	.26	.01	995	889.3	61.8	-66.4
73.50	0.67	0.00	0.01	.69	.24	-16.97	1007	889.9	60.1	-67.2
74.00	1.08	0.00	0.02	1.09	.05	.74	1092	890.5	58.4	-68.0
74.50	1.25	0.00	0.02	1.27	-16.99	.68	1120	891.1	56.6	-68.8
75.00	0.83	0.00	0.02	.85	-17.16	.87	1046	891.7	54.7	-69.6
75.50	0.62	0.00	0.02	.64	.29	.99	984	892.4	52.7	-70.4
76.00	0.61	0.00	0.02	.63	.29	-17.00	981	893.1	50.6	-71.2
76.50	0.62	0.00	0.02	.65	.28	-16.99	988	893.8	48.5	-72.0
77.00	0.64	0.00	0.02	.66	.28	.97	989	894.6	46.2	-72.7
77.50	0.62	0.00	0.03	.65	.29	.98	984	895.3	43.7	-73.4
78.00	0.61	0.00	0.03	.64	.30	.99	981	896.1	41.1	-74.2
78.50	0.60	0.00	0.03	.63	.31	-17.00	978	896.9	38.3	-74.9
79.00	0.58	0.00	0.03	.61	.32	.03	972	897.7	35.3	-75.6
79.50	0.57	0.00	0.03	.60	.32	.04	971	898.5	32.1	-76.2
80.00	0.57	0.00	0.03	.61	.32	.05	977	899.4	28.6	-76.9
80.50	0.56	0.00	0.04	.60	.33	.05	973	900.2	24.7	-77.5
81.00	0.59	0.00	0.04	.63	.31	.03	981	901.1	20.5	-78.0
81.50	0.60	0.00	0.04	.64	.31	.02	984	902.0	15.9	-78.5
82.00	0.58	0.00	0.04	.62	.32	.04	978	902.9	10.9	-79.0
82.50	0.61	0.00	0.04	.66	.30	.01	990	903.8	5.4	-79.4
83.00	0.57	0.00	0.05	.61	.34	.04	969	904.7	359.4	-79.7
83.50	0.73	0.00	0.05	.78	.24	-16.92	1017	905.7	352.9	-79.9
84.00	0.84	0.00	0.05	.89	.20	.85	1040	906.6	345.9	-80.1
84.50	0.79	0.00	0.05	.84	.23	.87	1027	907.5	338.7	-80.1
85.00	0.74	0.00	0.05	.80	.25	.89	1015	908.5	331.2	-80.0
85.50	0.78	0.00	0.05	.83	.23	.89	1024	909.4	323.7	-79.7
86.00	0.75	0.00	0.06	.81	.24	.91	1021	910.4	316.3	-79.4
86.50	0.71	0.00	0.06	.77	.27	.93	1009	911.3	309.2	-78.9
87.00	0.69	0.10	0.06	.84	.24	.89	1025	912.3	302.6	-78.3
87.50	0.61	0.17	0.06	.84	.24	.90	1025	913.2	296.4	-77.6
88.00	0.54	0.23	0.06	.83	.24	.91	1024	914.1	290.6	-76.9
88.50	0.52	0.27	0.06	.85	.23	.91	1030	915.1	285.4	-76.1
89.00	0.50	0.32	0.06	.88	.23	.89	1033	916.0	280.6	-75.2
89.50	0.50	0.35	0.07	.92	.22	.86	1038	916.9	276.3	-74.2
90.00	0.53	0.38	0.07	.98	.19	.83	1049	917.9	272.3	-73.3
90.50	0.35	0.41	0.07	.84	.25	.91	1022	918.8	268.7	-72.3

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_S$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41591.00	0.28	0.44	0.07	.79	-17.28	-16.95	1011	919.7	265.3	-71.2
91.50	0.21	0.46	0.07	.74	.31	.98	996	920.6	262.2	-70.1
92.00	0.19	0.48	0.07	.74	.31	.99	997	921.4	259.3	-69.0
92.50	0.14	0.50	0.07	.71	.33	-17.01	989	922.3	256.7	-67.9
93.00	0.12	0.51	0.08	.71	.33	.01	989	923.2	254.1	-66.8
93.50	0.08	0.52	0.08	.67	.36	.04	976	924.0	251.8	-65.7
94.00	0.03	0.53	0.08	.64	.38	.07	965	924.8	249.5	-64.5
94.50	0.01	0.54	0.08	.63	.39	.07	958	925.7	247.4	-63.3
95.00	-0.03	0.54	0.08	.59	.42	.11	947	926.5	245.4	-62.2
95.50	-0.08	0.55	0.08	.56	.44	.14	936	927.3	243.5	-61.0
96.00	-0.12	0.56	0.08	.52	.47	.18	918	928.0	241.6	-59.8
96.50	-0.14	0.56	0.08	.51	.48	.19	912	928.8	239.9	-58.6
97.00	-0.10	0.57	0.08	.55	.45	.15	931	929.5	238.2	-57.4
97.50	-0.12	0.57	0.08	.54	.46	.16	924	930.2	236.5	-56.2
98.00	-0.18	0.57	0.09	.47	.53	.22	885	930.9	234.9	-55.0
98.50	-0.17	0.58	0.09	.49	.51	.20	897	931.6	233.3	-53.8
99.00	-0.19	0.58	0.09	.48	.52	.22	895	932.3	231.8	-52.6
99.50	-0.17	0.58	0.09	.49	.51	.21	898	932.9	230.3	-51.4
41600.00	-0.19	0.58	0.09	.48	.52	.22	890	933.6	228.9	-50.1
00.50	-0.15	0.58	0.09	.52	.49	.18	908	934.2	227.5	-48.9
01.00	-0.08	0.58	0.09	.59	.44	.12	937	934.8	226.1	-47.7
01.50	-0.06	0.58	0.09	.60	.44	.11	937	935.3	224.7	-46.5
02.00	-0.05	0.58	0.09	.62	.42	.10	951	935.9	223.4	-45.2
41603.00	-0.07	0.57	0.09	.59	-17.45	-17.12	934	936.9	220.8	-42.8
04.00	-0.11	0.57	0.09	.54	.50	.15	904	937.9	218.3	-40.3
05.00	-0.13	0.56	0.09	.52	.51	.18	899	938.8	215.8	-37.8
06.00	-0.15	0.54	0.09	.49	.54	.21	885	939.6	213.4	-35.3
07.00	-0.15	0.53	0.09	.47	.56	.23	875	940.3	211.0	-32.8
08.00	-0.10	0.52	0.09	.51	.52	.20	896	940.9	208.7	-30.4
09.00	0.00	0.50	0.09	.59	.47	.12	922	941.4	206.4	-27.9
10.00	0.12	0.49	0.09	.70	.41	.04	957	941.8	204.1	-25.4
11.00	0.08	0.47	0.09	.64	.45	.09	935	942.2	201.8	-22.9
12.00	0.10	0.46	0.08	.64	.45	.09	932	942.4	199.6	-20.4
13.00	0.12	0.44	0.08	.64	.46	.08	926	942.5	197.4	-17.9
41613.50	0.12	0.43	0.08	.64	-17.47	-17.24	921	942.6	196.3	-16.7
14.00	0.15	0.42	0.08	.66	.46	.22	926	942.6	195.2	-15.4
14.50	0.19	0.41	0.08	.68	.44	.21	934	942.6	194.1	-14.2
15.00	0.18	0.40	0.08	.66	.45	.23	929	942.5	193.1	-12.9
15.50	0.19	0.39	0.08	.66	.45	.23	928	942.5	192.0	-11.7
16.00	0.25	0.38	0.07	.71	.42	.20	944	942.4	190.9	-10.5
16.50	0.27	0.37	0.07	.71	.43	.20	940	942.3	189.8	-9.2
17.00	0.31	0.36	0.07	.74	.41	.18	947	942.1	188.7	-8.0
17.50	0.32	0.35	0.07	.75	.40	.18	951	942.0	187.7	-6.7
18.00	0.34	0.34	0.07	.75	.40	.18	949	941.8	186.6	-5.5
18.50	0.36	0.33	0.07	.76	.40	.17	949	941.6	185.5	-4.3
19.00	0.38	0.32	0.07	.77	.39	.17	953	941.3	184.5	-3.0
19.50	0.40	0.31	0.07	.78	.39	.16	953	941.1	183.4	-1.8
20.00	0.37	0.30	0.06	.74	.42	.18	935	940.8	182.3	-0.5
20.50	0.34	0.29	0.06	.70	.44	.21	921	940.5	181.3	0.7
21.00	0.31	0.28	0.06	.66	.45	.24	911	940.1	180.2	1.9
41621.20	0.24	0.28	0.06	.57	-17.51	-17.30	879	940.0	179.8	2.4
21.40	0.07	0.27	0.06	.41	.65	.44	791	939.8	179.4	2.9
21.60	0.40	0.27	0.06	.72	.40	.20	944	939.7	178.9	3.4
21.80	0.56	0.26	0.06	.88	.32	.11	989	939.5	178.5	3.9
22.00	0.88	0.26	0.06	1.20	.20	-16.97	1041	939.4	178.1	4.4
22.20	1.20	0.25	0.06	1.51	.12	.86	1077	939.2	177.7	4.9
22.40	1.52	0.25	0.06	1.83	.05	.77	1109	939.1	177.2	5.4

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log p_e$	$\log p_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41622.60	1.04	0.25	0.06	1.34	-17.19	-16.90	1048	938.9	176.8	5.9
22.80	0.40	0.24	0.06	.69	.45	-17.21	905	938.7	176.4	6.4
23.00	0.08	0.24	0.06	.37	.70	.49	727	938.5	176.0	6.9
41623.50	0.29	0.23	0.05	.57	-17.51	-17.30	862	938.1	174.9	8.1
24.00	0.27	0.22	0.05	.54	.53	.32	846	937.6	173.8	9.3
24.50	0.24	0.20	0.05	.50	.55	.36	836	937.1	172.8	10.5
25.00	0.22	0.19	0.05	.47	.57	.38	830	936.6	171.7	11.8
25.50	0.23	0.18	0.05	.46	.57	.39	825	936.0	170.7	13.0
26.00	0.21	0.17	0.05	.42	.61	.43	800	935.5	169.6	14.2
26.50	0.21	0.16	0.05	.41	.62	.44	794	934.9	168.5	15.4
27.00	0.17	0.15	0.04	.36	.67	.50	760	934.3	167.5	16.7
27.50	0.20	0.14	0.04	.38	.65	.47	769	933.7	166.4	17.9
28.00	0.23	0.12	0.04	.40	.62	.45	782	933.0	165.3	19.1
28.50	0.21	0.11	0.04	.37	.65	.48	759	932.3	164.3	20.3
29.00	0.20	0.10	0.04	.34	.69	.52	732	931.7	163.2	21.5
29.50	0.23	0.09	0.04	.36	.66	.49	749	931.0	162.1	22.7
30.00	0.24	0.08	0.03	.36	.66	.49	749	930.3	161.1	24.0
30.50	0.22	0.07	0.03	.33	.69	.53	722	929.5	160.0	25.2
31.00	0.26	0.06	0.03	.35	.66	.50	737	928.8	158.9	26.4
31.50	0.24	0.05	0.03	.33	.69	.53	722	928.0	157.8	27.6
32.00	0.28	0.04	0.03	.35	.66	.50	738	927.3	156.8	28.8
32.50	0.26	0.03	0.03	.32	.69	.54	709	926.5	155.7	30.0
33.00	0.28	0.02	0.03	.32	.69	.54	708	925.7	154.6	31.2
33.50	0.29	0.01	0.02	.32	.69	.53	705	924.9	153.5	32.4
34.00	0.27	0.00	0.02	.29	.73	.58	678	924.1	152.4	33.6
34.50	0.26	-0.01	0.02	.27	.76	.60	663	923.3	151.3	34.8
35.00	0.27	-0.02	0.02	.27	.75	.60	661	922.4	150.2	36.0
35.50	0.31	-0.03	0.02	.29	.72	.57	680	921.6	149.1	37.2
36.00	0.32	-0.04	0.02	.29	.72	.57	674	920.8	148.0	38.4
36.50	0.41	-0.05	0.01	.37	.61	.46	733	919.9	146.9	39.6
37.00	0.42	-0.06	0.01	.38	.59	.45	727	919.1	145.8	40.8
37.50	0.61	-0.07	0.01	.56	.42	.28	834	918.2	144.7	41.9
38.00	0.55	-0.08	0.01	.48	.49	.34	792	917.3	143.6	43.1
38.50	0.46	-0.09	0.01	.38	.58	.44	732	916.5	142.5	44.3
39.00	0.52	-0.09	0.01	.43	.52	.39	767	915.6	141.4	45.5
39.50	0.53	-0.10	0.01	.44	.51	.37	772	914.8	140.2	46.7
40.00	0.49	-0.11	0.01	.39	.56	.42	740	913.9	139.1	47.9
40.50	0.45	-0.12	0.01	.34	.61	.48	700	913.1	137.9	49.0
41.00	0.67	-0.13	0.01	.55	.40	.27	827	912.2	136.8	50.2
41.50	0.76	-0.13	0.00	.63	.34	.21	858	911.4	135.7	51.4
42.00	0.69	-0.14	0.00	.55	.40	.26	819	910.5	134.5	52.5
42.50	0.65	-0.14	0.00	.51	.42	.29	804	909.7	133.3	53.7
43.00	0.63	-0.15	0.00	.48	.44	.32	791	908.8	132.2	54.9
43.50	0.72	-0.16	0.00	.56	.37	.25	828	908.0	131.0	56.0
44.00	0.78	-0.16	0.00	.62	.33	.20	852	907.2	129.8	57.2
44.50	0.71	-0.16	0.00	.55	.37	.25	820	906.4	128.6	58.3
45.00	0.70	-0.17	0.00	.53	.38	.26	811	905.6	127.4	59.5
45.50	0.81	-0.17	0.00	.63	.30	.18	858	904.8	126.2	60.6
46.00	0.81	-0.17	0.00	.63	.30	.18	859	904.0	125.0	61.8
46.50	0.80	-0.18	-0.01	.61	.31	.19	848	903.3	123.7	62.9
47.00	0.78	-0.18	-0.01	.59	.32	.20	836	902.5	122.5	64.1
47.50	0.83	-0.18	-0.01	.65	.27	.16	860	901.8	121.2	65.2
48.00	0.79	-0.18	-0.01	.60	.30	.19	841	901.0	120.0	66.4
48.50	0.74	-0.18	-0.01	.55	.33	.22	820	900.3	118.7	67.5
49.00	0.72	-0.18	-0.01	.53	.34	.24	808	899.6	117.4	68.6
49.50	0.75	-0.18	-0.01	.56	.32	.21	822	899.0	116.1	69.8
50.00	0.75	-0.17	-0.01	.57	.30	.20	827	898.3	114.8	70.9
50.50	0.70	-0.17	-0.01	.52	.34	.24	804	897.7	113.4	72.0
51.00	0.73	-0.17	-0.01	.55	.31	.21	821	897.1	112.1	73.1

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41651.50	0.68	-0.16	-0.01	.51	-17.33	-17.24	803	896.5	110.7	74.2
52.00	0.65	-0.15	-0.01	.49	.35	.25	791	895.9	109.3	75.3
52.50	0.68	-0.14	-0.01	.52	.32	.22	806	895.3	107.8	76.4
53.00	0.63	-0.13	-0.01	.48	.35	.25	788	894.8	106.4	77.5
53.50	0.65	-0.12	-0.01	.52	.31	.22	808	894.3	104.9	78.6
54.00	0.59	-0.10	-0.01	.48	.34	.25	786	893.8	103.4	79.7
54.50	0.59	-0.08	-0.01	.50	.32	.23	796	893.4	101.8	80.8
55.00	0.56	-0.06	-0.01	.48	.33	.25	786	892.9	100.3	81.9
55.50	0.55	-0.04	-0.01	.50	.31	.23	797	892.5	98.6	83.0
56.00	0.54	-0.01	-0.01	.52	.29	.21	808	892.1	97.0	84.0
56.50	0.48	0.00	-0.01	.47	.33	.25	783	891.8	95.2	85.1
57.00	0.45	0.00	-0.01	.44	.36	.27	767	891.5	93.5	86.2
57.50	0.49	0.00	-0.01	.48	.32	.23	788	891.2	91.6	87.2
58.00	0.50	0.00	-0.01	.49	.31	.22	792	890.9	89.7	88.3
58.50	0.52	0.00	-0.01	.50	.30	.22	795	890.7	87.7	89.3
59.00	0.48	0.00	-0.01	.46	.33	.25	774	890.5	85.7	90.3
59.50	0.46	0.00	-0.01	.45	.34	.26	771	890.3	83.5	91.3
60.00	0.47	0.00	-0.01	.46	.33	.25	776	890.1	81.2	92.3
60.50	0.53	0.00	-0.01	.52	.27	.19	809	890.0	78.8	93.3
61.00	0.51	0.00	-0.01	.50	.29	.21	799	890.0	76.3	94.3
61.50	0.52	0.00	-0.01	.51	.28	.20	804	889.9	73.6	95.2
62.00	0.55	0.00	-0.01	.54	.25	.17	820	889.9	70.7	96.2
62.50	0.52	0.00	-0.01	.51	.28	.20	805	889.9	67.6	97.1
63.00	0.55	0.00	-0.01	.54	.25	.17	820	890.0	64.3	98.0
63.50	0.57	0.00	-0.01	.56	.24	.15	829	890.1	60.7	98.8
64.00	0.70	0.00	-0.01	.69	.15	.07	881	890.2	56.8	99.6
64.50	0.83	0.00	-0.01	.82	.08	-16.99	925	890.4	52.6	100.4
65.00	0.70	0.00	-0.01	.69	.16	-17.07	878	890.6	47.9	101.2
65.50	0.67	0.00	-0.01	.66	.17	.09	868	890.8	42.8	101.8
66.00	0.72	0.00	-0.01	.71	.14	.05	891	891.1	37.3	102.5
66.50	0.76	0.00	0.00	.76	.11	.03	909	891.4	31.3	103.0
67.00	0.91	0.00	0.00	.91	.04	-16.95	954	891.7	24.8	103.4
67.50	0.81	0.00	0.00	.80	.10	-17.01	917	892.1	17.8	103.8
68.00	0.78	0.00	0.00	.77	.12	.03	909	892.5	10.6	104.0
68.50	0.72	0.00	0.00	.72	.14	.05	893	892.9	3.1	104.1
69.00	0.71	0.00	0.00	.71	.15	.06	892	893.3	355.5	104.1
69.50	0.73	0.00	0.00	.73	.14	.05	901	893.8	348.1	104.0
70.00	0.73	0.00	0.00	.73	.14	.05	902	894.4	340.9	103.8
70.50	0.74	0.00	0.00	.74	.14	.04	907	894.9	334.1	103.4
71.00	0.76	0.00	0.00	.76	.13	.03	914	895.5	327.8	103.0
71.50	0.75	0.00	0.00	.76	.13	.04	916	896.2	321.9	102.4
72.00	0.72	0.00	0.00	.72	.16	.06	902	896.8	316.6	101.8
72.50	0.71	0.00	0.00	.72	.16	.06	903	897.5	311.7	101.1
73.00	0.73	0.00	0.00	.73	.16	.06	907	898.2	307.2	100.4
73.50	0.70	0.00	0.00	.70	.18	.08	895	899.0	303.0	99.7
74.00	0.79	0.00	0.01	.80	.13	.03	930	899.7	299.2	98.8
74.50	0.81	0.00	0.01	.81	.13	.02	933	900.5	295.7	98.0
75.00	0.75	0.00	0.01	.75	.16	.06	913	901.4	292.5	97.1
75.50	0.71	0.00	0.01	.72	.18	.08	904	902.2	289.5	96.3
76.00	0.65	0.00	0.01	.66	.23	.12	882	903.1	286.7	95.3
76.50	0.67	0.00	0.01	.67	.23	.12	886	904.0	284.1	94.4
77.00	0.66	0.00	0.01	.66	.24	.13	883	904.9	281.6	93.5
77.50	0.62	0.00	0.01	.63	.26	.15	871	905.8	279.2	92.5
78.00	0.61	0.00	0.01	.62	.27	.16	867	906.8	277.0	91.5
78.50	0.55	0.00	0.01	.56	.33	.21	840	907.8	274.8	90.5
79.00	0.59	0.00	0.01	.60	.30	.18	858	908.8	272.8	89.5
79.50	0.61	0.00	0.01	.62	.29	.17	869	909.8	270.8	88.5
80.00	0.57	0.00	0.01	.58	.32	.20	853	910.9	268.9	87.5
80.50	0.56	0.00	0.01	.57	.34	.21	849	911.9	267.1	86.5
81.00	0.52	0.00	0.01	.53	.37	.25	831	913.0	265.4	85.5

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)	*
41681.50	0.51	0.00	0.01	.52	-17.39	-17.26	827	914.1	263.6	84.4	
82.00	0.56	0.02	0.01	.58	.34	.21	857	915.2	262.0	83.4	
82.50	0.47	0.05	0.01	.53	.39	.26	835	916.3	260.4	82.4	
83.00	0.43	0.08	0.01	.52	.40	.27	831	917.4	258.8	81.3	
83.50	0.42	0.10	0.01	.53	.40	.26	838	918.5	257.2	80.2	
84.00	0.41	0.11	0.01	.54	.40	.26	844	919.7	255.7	79.2	
84.50	0.41	0.13	0.01	.54	.41	.27	843	920.8	254.2	78.1	
85.00	0.35	0.13	0.01	.49	.46	.31	819	922.0	252.8	77.0	
85.50	0.34	0.14	0.01	.49	.47	.31	821	923.1	251.3	76.0	
86.00	0.35	0.15	0.01	.51	.45	.30	836	924.3	249.9	74.9	
86.50	0.34	0.16	0.01	.51	.45	.30	839	925.5	248.6	73.8	
87.00	0.34	0.16	0.01	.51	.45	.30	841	926.6	247.2	72.7	
87.50	0.30	0.16	0.01	.47	.49	.34	822	927.8	245.8	71.6	
88.00	0.35	0.17	0.01	.52	.45	.30	850	929.0	244.5	70.5	
88.50	0.42	0.17	0.01	.59	.40	.24	886	930.1	243.2	69.4	
89.00	0.36	0.17	0.00	.53	.46	.29	860	931.3	241.9	68.3	
89.50	0.30	0.17	0.00	.47	.51	.35	832	932.5	240.6	67.2	
90.00	0.34	0.17	0.00	.51	.48	.32	855	933.6	239.3	66.1	
90.50	0.34	0.16	0.00	.50	.50	.33	852	934.8	238.1	65.0	
91.00	0.38	0.16	0.00	.55	.46	.29	880	935.9	236.8	63.9	
91.50	0.30	0.16	0.00	.46	.54	.37	836	937.1	235.6	62.7	
92.00	0.32	0.15	0.00	.47	.53	.36	843	938.2	234.3	61.6	
92.50	0.34	0.15	0.00	.49	.52	.34	856	939.3	233.1	60.5	
93.00	0.39	0.15	0.00	.53	.49	.31	880	940.4	231.9	59.4	
93.50	0.44	0.14	0.00	.57	.46	.26	903	941.5	230.7	58.2	
94.00	0.38	0.13	-0.01	.51	.52	.33	876	942.6	229.5	57.1	
94.50	0.38	0.13	-0.01	.50	.53	.34	873	943.7	228.3	56.0	
95.00	0.38	0.12	-0.01	.49	.54	.35	871	944.7	227.1	54.8	
95.50	0.35	0.12	-0.01	.46	.57	.38	857	945.7	225.9	53.7	
96.00	0.32	0.11	-0.01	.42	.62	.42	836	946.8	224.8	52.5	
96.50	0.35	0.10	-0.01	.44	.60	.41	852	947.8	223.6	51.4	
97.00	0.35	0.10	-0.01	.43	.61	.42	849	948.7	222.5	50.2	
97.50	0.35	0.09	-0.02	.42	.63	.43	846	949.7	221.3	49.1	
98.00	0.35	0.08	-0.02	.41	.64	.44	842	950.6	220.1	47.9	
98.50	0.32	0.07	-0.02	.38	.68	.48	826	951.6	219.0	46.8	
99.00	0.33	0.06	-0.02	.37	.69	.49	822	952.5	217.9	45.6	
99.50	0.33	0.05	-0.02	.36	.71	.50	817	953.3	216.7	44.5	
41700.00	0.36	0.04	-0.02	.38	.69	.48	834	954.2	215.6	43.3	
00.50	0.31	0.03	-0.02	.32	.77	.56	794	955.0	214.5	42.1	
01.00	0.32	0.02	-0.02	.32	.77	.56	796	955.8	213.3	41.0	
01.50	0.32	0.01	-0.03	.31	.78	.57	791	956.5	212.2	39.8	
02.00	0.48	0.01	-0.03	.46	.61	.40	896	957.3	211.1	38.6	
02.50	0.39	0.00	-0.03	.35	.73	.52	822	958.0	210.0	37.4	
03.00	0.34	-0.01	-0.03	.30	.80	.59	783	958.7	208.9	36.3	
03.50	0.48	-0.03	-0.03	.42	.66	.45	877	959.3	207.8	35.1	
04.00	0.44	-0.03	-0.03	.37	.72	.50	848	959.9	206.7	33.9	
04.50	0.43	-0.04	-0.04	.34	.76	.54	830	960.5	205.6	32.7	
05.00	0.44	-0.06	-0.04	.34	.76	.54	833	961.1	204.5	31.5	
05.50	0.47	-0.07	-0.04	.37	.72	.50	857	961.6	203.4	30.3	
06.00	0.49	-0.08	-0.04	.37	.72	.51	858	962.1	202.3	29.2	
06.50	0.53	-0.09	-0.04	.40	.69	.47	881	962.5	201.2	28.0	
07.00	0.59	-0.10	-0.04	.45	.64	.42	914	963.0	200.1	26.8	
07.50	0.56	-0.11	-0.04	.40	.70	.47	884	963.4	199.0	25.6	
08.00	0.52	-0.12	-0.05	.36	.74	.52	858	963.7	197.9	24.4	
08.50	0.49	-0.13	-0.05	.31	.81	.59	821	964.0	196.8	23.2	
09.00	0.51	-0.15	-0.05	.32	.80	.57	830	964.3	195.7	22.0	
09.50	0.53	-0.16	-0.05	.32	.80	.57	828	964.5	194.6	20.8	
10.00	0.55	-0.17	-0.05	.33	.79	.56	835	964.7	193.6	19.6	
10.50	0.55	-0.18	-0.05	.31	.82	.59	820	964.9	192.5	18.4	
11.00	0.54	-0.19	-0.05	.30	.83	.60	817	965.0	191.4	17.2	

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{P}$	$10^6 \dot{P}_s$	$10^6 \dot{P}_t$	$-10^6 \dot{P}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$a_\pi - a_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41711.50	0.59	-0.20	-0.06	.33	-17.79	-17.56	849	965.1	190.3	16.0
12.00	0.59	-0.21	-0.06	.32	.80	.58	841	965.2	189.2	14.8
12.50	0.57	-0.22	-0.06	.28	.86	.63	808	965.2	188.1	13.5
13.00	0.57	-0.24	-0.06	.27	.87	.65	806	965.2	187.1	12.3
13.50	0.61	-0.25	-0.06	.30	.82	.60	839	965.1	186.0	11.1
14.00	0.62	-0.26	-0.06	.29	.84	.62	830	965.0	184.9	9.9
14.50	0.62	-0.27	-0.06	.29	.84	.62	828	964.9	183.8	8.7
15.00	0.62	-0.28	-0.07	.27	.87	.65	809	964.7	182.7	7.5
15.50	0.63	-0.29	-0.07	.26	.89	.66	802	964.5	181.7	6.3
16.00	0.65	-0.30	-0.07	.28	.85	.63	823	964.3	180.6	5.0
16.50	0.68	-0.32	-0.07	.29	.84	.62	833	964.0	179.5	3.8
17.00	0.65	-0.33	-0.07	.25	.90	.68	793	963.7	178.4	2.6
17.50	0.70	-0.34	-0.07	.29	.84	.62	840	963.3	177.3	1.4
18.00	0.70	-0.35	-0.07	.28	.85	.63	832	962.9	176.2	0.1
18.50	0.75	-0.36	-0.08	.31	.80	.58	860	962.5	175.1	-1.1
19.00	0.79	-0.37	-0.08	.35	.75	.53	894	962.0	174.1	-2.3
19.50	0.81	-0.38	-0.08	.35	.75	.53	892	961.5	173.0	-3.5
20.00	0.83	-0.39	-0.08	.36	.74	.52	899	961.0	171.9	-4.8
20.50	0.85	-0.40	-0.08	.37	.73	.51	908	960.4	170.8	-6.0
21.00	0.89	-0.41	-0.08	.40	.69	.47	926	959.8	169.7	-7.2
21.50	0.83	-0.42	-0.08	.33	.78	.55	870	959.2	168.6	-8.5
22.00	0.82	-0.43	-0.08	.31	.81	.58	851	958.5	167.5	-9.7
22.50	0.84	-0.44	-0.08	.31	.81	.58	851	957.8	166.4	-10.9
23.00	0.85	-0.45	-0.08	.32	.79	.56	866	957.0	165.3	-12.2
23.50	0.86	-0.46	-0.09	.32	.78	.56	872	956.3	164.2	-13.4
24.00	0.85	-0.47	-0.09	.30	.81	.59	852	955.5	163.1	-14.6
24.50	0.81	-0.48	-0.09	.24	.90	.68	769	954.6	161.9	-15.9
25.00	0.85	-0.49	-0.09	.27	.84	.63	829	953.8	160.8	-17.1
25.50	0.86	-0.49	-0.09	.28	.83	.61	837	952.4	159.7	-18.3
26.00	0.84	-0.50	-0.09	.25	.87	.66	808	952.0	158.6	-19.6
26.50	0.87	-0.51	-0.09	.27	.83	.62	835	951.0	157.4	-20.8
27.00	0.88	-0.52	-0.09	.28	.81	.61	843	950.1	156.3	-22.0
27.50	0.91	-0.52	-0.09	.30	.78	.58	859	949.1	155.1	-23.3
28.00	0.92	-0.53	-0.09	.30	.78	.57	856	948.1	154.0	-24.5
28.50	0.95	-0.54	-0.09	.32	.75	.54	872	947.0	152.8	-25.7
29.00	0.96	-0.54	-0.09	.32	.74	.54	877	946.0	151.7	-27.0
29.50	0.99	-0.55	-0.09	.35	.70	.50	902	944.9	150.5	-28.2
30.00	0.99	-0.56	-0.09	.34	.72	.51	884	943.8	149.3	-29.4
30.50	1.04	-0.56	-0.09	.39	.66	.45	915	942.7	148.1	-30.7
31.00	0.99	-0.57	-0.09	.33	.72	.52	879	941.5	146.9	-31.9
31.50	0.97	-0.58	-0.09	.30	.75	.56	856	940.4	145.7	-33.2
32.00	1.00	-0.58	-0.09	.32	.73	.53	870	939.2	144.5	-34.4
32.50	0.97	-0.58	-0.09	.30	.75	.56	855	938.0	143.2	-35.6
33.00	0.94	-0.59	-0.09	.26	.80	.62	819	936.8	142.0	-36.9
33.50	0.97	-0.59	-0.09	.29	.75	.57	850	935.6	140.7	-38.1
34.00	0.94	-0.59	-0.09	.26	.80	.61	811	934.4	139.4	-39.3
34.50	1.12	-0.60	-0.09	.43	.58	.39	942	933.2	138.1	-40.5
35.00	1.22	-0.60	-0.09	.53	.49	.29	983	932.0	136.8	-41.8
35.50	1.14	-0.60	-0.09	.45	.56	.36	940	930.8	135.5	-43.0
36.00	1.11	-0.60	-0.09	.42	.59	.39	924	929.5	134.1	-44.2
36.50	1.16	-0.60	-0.09	.47	.54	.33	946	928.3	132.7	-45.4
37.00	1.10	-0.60	-0.09	.41	.59	.39	913	927.0	131.3	-46.7
37.50	1.07	-0.60	-0.09	.38	.62	.42	891	925.8	129.8	-47.9
38.00	1.06	-0.60	-0.09	.38	.62	.42	892	924.6	128.4	-49.1
38.50	1.00	-0.60	-0.09	.32	.68	.49	847	923.3	126.8	-50.3
39.00	1.00	-0.59	-0.09	.32	.68	.49	845	922.1	125.3	-51.5
39.50	1.04	-0.59	-0.08	.37	.61	.42	887	920.9	123.7	-52.7
40.00	1.08	-0.59	-0.08	.41	.56	.37	912	919.7	122.0	-53.9
40.50	1.02	-0.58	-0.08	.36	.62	.42	877	918.5	120.3	-55.1
41.00	0.99	-0.58	-0.08	.33	.65	.46	852	917.3	118.6	-56.3

Table 3 (cont.)

1968 66A (Explorer 39)

MJD	$-10^6 \dot{p}$	$10^6 \dot{p}_s$	$10^6 \dot{p}_t$	$-10^6 \dot{p}_a$	$\log \rho_e$	$\log \rho_s$	T_π (°K)	z (km)	$\alpha_\pi - \alpha_\odot$ (deg)	$\delta_\pi - \delta_\odot$ (deg)
41741.50	0.96	-0.57	-0.08	.31	-17.67	-17.49	838	916.1	116.7	-57.5
42.00	0.92	-0.56	-0.08	.28	.70	.53	816	914.9	114.8	-58.7
42.50	0.94	-0.55	-0.08	.31	.65	.49	845	913.7	112.8	-59.9
43.00	0.98	-0.54	-0.08	.36	.59	.41	878	912.6	110.8	-61.0
43.50	1.07	-0.53	-0.08	.47	.48	.29	939	911.5	108.6	-62.2
44.00	1.01	-0.51	-0.07	.42	.52	.34	912	910.4	106.3	-63.3
44.50	0.92	-0.50	-0.07	.35	.59	.42	868	909.3	103.8	-64.5
45.00	0.91	-0.48	-0.07	.35	.58	.43	874	908.2	101.2	-65.6
45.50	0.87	-0.47	-0.07	.33	.59	.45	864	907.2	98.4	-66.7
46.00	0.86	-0.44	-0.07	.35	.56	.43	881	906.2	95.4	-67.8
46.50	0.79	-0.41	-0.07	.31	.61	.48	848	905.2	92.1	-68.8
47.00	0.86	-0.38	-0.07	.41	.49	.36	910	904.3	88.6	-69.9
47.50	0.97	-0.34	-0.06	.57	.36	.21	976	903.3	84.8	-70.8
48.00	0.86	-0.30	-0.06	.50	.41	.27	947	902.4	80.6	-71.8
48.50	0.71	-0.25	-0.06	.40	.50	.37	898	901.6	76.0	-72.7
49.00	0.60	-0.19	-0.06	.34	.56	.44	858	900.7	71.0	-73.6
49.50	0.53	-0.13	-0.06	.34	.56	.44	857	899.9	65.4	-74.4
50.00	0.49	-0.05	-0.05	.38	.51	.39	880	899.2	59.4	-75.1
50.50	0.50	0.00	-0.05	.45	.44	.31	917	898.5	52.9	-75.7
51.00	0.49	0.00	-0.05	.44	.45	.32	911	897.8	46.0	-76.2
51.50	0.45	0.00	-0.05	.40	.49	.37	888	897.2	38.8	-76.6
52.00	0.46	0.00	-0.05	.41	.48	.35	890	896.6	31.7	-76.9
52.50	0.44	0.00	-0.05	.40	.49	.36	881	896.0	23.3	-77.1
53.00	0.45	0.00	-0.04	.41	.48	.35	885	895.5	16.4	-77.1
53.50	0.46	0.00	-0.04	.42	.47	.34	888	895.0	9.3	-77.0
54.00	0.50	0.00	-0.04	.46	.43	.30	908	894.6	2.6	-76.9
54.50	0.51	0.00	-0.04	.47	.42	.30	912	894.2	356.3	-76.6
55.00	0.49	0.00	-0.04	.45	.43	.32	902	893.9	350.6	-76.2
55.50	0.47	0.00	-0.03	.44	.44	.33	896	893.6	345.3	-75.8
56.00	0.46	0.00	-0.03	.43	.45	.34	888	893.4	340.5	-75.3
56.50	0.49	0.00	-0.03	.46	.42	.31	903	893.3	336.1	-74.8
57.00	0.50	0.00	-0.03	.47	.41	.30	906	893.1	332.1	-74.2
57.50	0.49	0.00	-0.03	.46	.43	.31	895	893.1	328.5	-73.6
58.00	0.44	0.00	-0.03	.42	.47	.36	867	893.1	325.1	-72.9
58.50	0.48	0.00	-0.02	.45	.44	.33	886	893.1	322.0	-72.3
59.00	0.39	0.00	-0.02	.36	.53	.43	826	893.2	319.1	-71.6
59.50	0.47	0.00	-0.02	.45	.44	.33	877	893.4	316.4	-70.9
60.00	0.61	0.00	-0.02	.59	.33	.22	937	893.6	313.9	-70.1
60.50	0.67	0.00	-0.02	.65	.30	.18	952	893.9	311.5	-69.4
61.00	0.70	0.00	-0.01	.69	.28	.15	958	894.2	309.3	-68.6
61.50	0.71	0.00	-0.01	.70	.28	.15	959	894.6	307.1	-67.9
62.00	0.70	0.00	-0.01	.68	.29	.16	951	895.1	305.1	-67.1
62.50	0.65	0.00	-0.01	.64	.32	.19	935	895.6	303.2	-66.3
63.00	0.48	0.00	-0.01	.48	.44	.32	859	896.2	301.3	-65.5
63.50	0.44	0.00	-0.01	.44	.48	.36	831	896.9	299.6	-64.7
64.00	0.43	0.00	-0.01	.42	.50	.38	815	897.6	297.8	-63.9
64.50	0.41	0.00	0.00	.41	.52	.40	806	898.4	296.2	-63.1
65.00	0.34	0.00	0.00	.34	.60	.48	691	899.2	294.6	-62.3
65.50	0.33	0.00	0.00	.33	.62	.49	698	900.2	293.0	-61.5
66.00	0.34	0.00	0.00	.34	.61	.48	688	901.1	291.5	-60.7
66.50	0.27	0.00	0.00	.27	.71	.59	691	902.2	290.0	-59.8
67.00	0.31	0.00	0.00	.31	.65	.53	690	903.3	288.6	-59.0
67.50	0.27	0.00	0.00	.27	.71	.59	662	904.5	287.2	-58.2
68.00	0.23	0.00	0.01	.23	.78	.66	660	905.8	285.8	-57.4